

SUPPLEMENT TO THE APPENDIX OF CAPTAIN PARRY'S
FIRST VOYAGE.

A

SUPPLEMENT

TO

**THE APPENDIX OF CAPTAIN PARRY'S VOYAGE FOR THE
DISCOVERY OF A NORTH-WEST PASSAGE,
IN THE YEARS 1819—20.**

CONTAINING

AN ACCOUNT OF THE SUBJECTS

OF

NATURAL HISTORY.

LONDON:

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ADVERTISEMENT.

ON returning from the late Expedition to the Polar Seas, I much regretted to find that the account of the Natural Productions collected on the former voyage had not yet been completed. Of the cause of the delay I need not here speak, as it has, in some measure, been explained in the course of the following pages. It is only necessary for me, therefore, to repeat my acknowledgments to the respective Writers of the following Notices, for the trouble they have kindly taken in drawing them up.

W. E. PARRY.

London, December, 1823.

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ERRATUM.

Page cexix, for Invertebrate Animals *read* Marine Invertebrate Animals.

APPENDIX X.

NATURAL HISTORY.

N^o X.

ZOOLOGY.

THE following account is limited to a notice of the animals which were met with during the period in which the Expedition remained within the Arctic Circle; it comprises an enumeration of the well-known species, accompanied by occasional remarks, and a more extended description of such as are considered to be previously undescribed.

MAMMALIA.

1. *URSUS MARITIMUS.* *Polar Bear.*

Seen occasionally during the voyage; frequent on the west coast of Davis' Strait, where they are more numerous than on the eastern side, being less disturbed by the whalers; but more rarely met with after the entrance of the ships into the Polar Sea, where seals and walruses which are their favourite food are scarce; only two bears were seen during the many months in which the Expedition remained at Melville Island, one in October and the other in the August following.

It is mentioned by several authors, but apparently without authority, that the white bear sleeps during the winter in caverns in the ice. Fabricius expressly states the contrary on his own knowledge. The bears which were seen in Melville Island may have passed the winter in the neighbourhood of Barrow's Straits, where it is probable open water may be found in the greater part, if not during the whole, of the year.

The weight of this species varies exceedingly according to the condition of the individual; one killed in the former Expedition weighed above 1,100 pounds; whereas another which was obtained in the present Voyage, and which was somewhat larger in all its measurements, weighed not quite 900 pounds.

The canine teeth are solitary in the upper, and approximate to the fore teeth in the under jaw.

On the return of the ships through Barrow's Strait, a bear was met with swimming in the water about mid-way between the shores which were about forty miles apart; no ice was in sight except a small quantity near the land; on the approach of the ships, he appeared alarmed and dived, but rose again speedily; a circumstance which may seem to confirm the remark of Fabricius, that well as the Polar bear swims, it is not able to remain long under water.

2. *GULO LUSCUS.* *Woolverene.*

The skull of a woolverene without the lower jaw was picked up in Melville Island, but the living animal was not met with. Since the return of the Expedition, the skull has been identified with one which is in the museum of the College of Surgeons, marked by the late Mr. John Hunter, as belonging to a woolverene from Labrador; it has also been identified with the skull of a woolverene in the collection of Joshua Brookes, esq., which he was so obliging as to cause to be taken out of the skin for the purpose of comparison. This animal is therefore enumerated with confidence amongst the quadrupeds of the North Georgian Islands, although it is probably of rare

occurrence. Mr. Brookes's specimen agrees very well with the description in *Pennant's History of Quadrupeds*; but in the plate the face is scarcely sufficiently sharp, or pointed.

3. MUSTELA ERMINEA. *Ermine.*

This species was shot at Possession Bay on the former Expedition, and was seen in the present voyage, on the continuation of the same coast, further to the southward. It probably does not inhabit the opposite side of Davis' Strait, as it is not noticed among the Greenland quadrupeds by Fabricius.

4. CANIS LUPUS. *Wolf.*

Inhabit the North Georgian Islands, and were seen almost daily during the winter, but would not suffer themselves to be approached within gunshot; they were of a very light colour, and of the full size of a setter dog.

Those naturalists, who believe that no animal, in a perfectly natural and wild state, will connect itself with one of a different species, will consider the long-agitated question, of the specific identity of the wolf and dog, as determined by a circumstance of frequent occurrence at Melville Island; in December and January, which are the months in which wolves are in season, a female paid almost daily visits to the neighbourhood of the ships, and remained until she was joined by a setter dog belonging to one of the officers; they were usually together from two to three hours, and as they did not go far away unless an endeavour was made to approach them, repeated and decided evidence was obtained of the purpose for which they were thus associated; as they became more familiar, the absences of the dog were of longer continuance, until at length he did not return, having probably fallen a sacrifice in an encounter with a male wolf; the female, however, continued to visit the ships as before, and enticed a second dog in the same manner, which, after several meetings, returned so severely bitten, as to be disabled for many days.

It is believed, that this is the first authenticated instance of an undomes-

ticated wolf having intercourse with a dog; when tamed, it is well known that they will readily breed together.

Whatever doubts may have once prevailed, it is now ascertained by the observations of modern naturalists, that neither in conformation, nor in the period of gestation, does any such difference exist between the wolf and dog, as will warrant a specific distinction. The manner of carrying the tail has been considered a difference; but amongst the Esquimaux dogs which have fallen under the notice of the late and the present expedition, there have been individuals who constantly carried their tails in the manner which was supposed to be peculiar to the wolf; these dogs approach nearer to the wolf in its wild state, than any of the other domesticated varieties; a young female was procured from the Esquimaux who were communicated with in Davis' Strait on the 7th of September, in the hope that by her means the perfect breed might be kept up in this country for the satisfaction of naturalists, a male which was brought to England by the former expedition being still alive; but she unfortunately disappeared from the Hecla during the detention of the ship in Leith roads to refit, and from subsequent inquiry, it is feared that she has ceased to exist as a living specimen. The only female which was brought home by the former expedition was presented to the Royal Menagerie at Paris, and has furnished the subject of an article in the splendid work of Messrs. Saint Hilaire and Frederic Cuvier, *L'Histoire Naturelle des Mammifères*; from whence the following passage has been extracted, for the purpose of noticing an erroneous supposition which it contains, and into which these eminent naturalists have been accidentally misled:—" Nous devons ces précieux Animaux à M. le docteur Leach, qui, en ayant obtenu une femelle pleine, au retour de l'expédition du Capitaine Ross, a bien voulu nous l'envoyer. Cette femelle a mis bas trois petits, un mâle et deux femelles, qui suffiront sans doute pour nous conserver une race dont l'intelligence et la force, appliquées à nos besoins domestiques, pourront nous rendre d'utiles services. Aucune de nos races de Chiens, qui se rapportent à celle-ci, ne sont aussi belles et aussi fortes." By an omission, doubtless of inadvertency, the keepers of the mena-

gerie were not apprized that the female in question was with young by a Newfoundland dog, belonging to an officer of the *Isabella*; and it has unfortunately happened, that the plate of the "*Chien des Esquimaux de la Baie de Baffin*," as well as the minute measurements and description in the letter-press, are taken, not from the mother, but from one of the young after it had attained its full growth; and it is not, therefore, a representation of a genuine Esquimaux dog as the authors designed. It is probable, however, that the mixed breed may possess the qualities which are ascribed to it by Messrs. Saint Hilaire and Cuvier, of strength and intelligence applicable to our domestic purposes, to as great an extent as the pure Esquimaux breed; and, judging from the plate, it is certainly not inferior in beauty.

5. *CANIS LAGOPUS. Arctic Fox.*

Inhabits all the countries which were visited by the expedition, and remains in the North Georgian Islands throughout the year, several having been caught in the winter: they differed in no respect from the descriptions of authors; the flesh is white, and without the rank smell of the common fox.

6. *LEPUS GLACIALIS. Polar Hare.*

L. albus, auribus apice nigris capite longioribus, caudâ abbreviatâ, unguibus validis latis depressis.

Inhabits Greenland, the southern coast of Barrow's Strait, and the North Georgian Islands where they are very abundant. Considerable numbers were killed in the summer as a supply of provision for the ships' companies; they were usually shot whilst feeding in ravines, and near the bottom of steep cliffs by the sea-side, which they ascend with great agility on being alarmed, and secure themselves in their holes amongst the loose stones near the top of the cliffs. None were seen during the winter, but it does not seem probable that they had quitted the island.

This species is larger than the *L. Variabilis*; the average weight being about 8 lbs.: the ears are longer in proportion to the head than those of the common hare, (*L. Timidus*), and much longer than those of the *L. Variabilis*; the ears of the common hare are usually considered one-tenth longer than the head, those of the present species are from one-fifth to one-seventh; the fore teeth are curves of a much larger circle, and the orbits of the eye project much more than those of either of the other species; the toes are five before and four behind, the fifth toe of the fore foot being very small, scarcely indeed more than a claw, and situated close to the knee; the claws are broad, depressed, and strong: those of the *L. Timidus* and *Variabilis* being, on the contrary, compressed and weak: the hind leg is shorter in proportion to the size of the animal, than in the *Variabilis*. The fur is exceedingly thick and woolly, of the purest white in spring and autumn, excepting a tuft of long black hair at the tips of the ears, which is reddish brown at the base: the whiskers are also black at the base for half their length. In some of the full grown specimens killed in the height of summer, the hair of the back and sides was a greyish brown towards the points, but the mass of fur beneath still remained white; the face and the front of the ears were a deeper grey. The fur is interspersed with long solitary hairs which, in many individuals were banded with brown and white in the middle of summer. The hares which Mr. Hearne describes in his northern voyage to inhabit the continent of America as high as the 72° of latitude, are stated to weigh 14 or 15 lbs., when full grown, and in good condition: the largest hare which was killed at Melville Island, did not amount to 9 lbs. Were it not for this difference in size, they might be supposed, from other parts of the description, to be the same species.

7. *LEMMUS HUDSONIUS.* *Hudson's Bay Lemming.*

Are abundant in the country on the west side of Davis' Strait, and in the islands of the Polar Sea, but are probably unknown in Greenland; as they

are not mentioned by Fabricius. They live in summer in burrows, and in winter in nests of moss on the surface of the ground beneath the snow, rarely going abroad during the severity of winter. This species is distinguished by the prolongation of the two middle toes of the fore feet into a pointed callus beneath the claw, making the toes appear double clawed: the same peculiarity is observable in the outer toes, but in a much less degree, and it is altogether less marked in the female and young, than in the male. The tail is not quite half an inch in length, terminating with long stiff hairs, which alone appear beyond the fur; it is erroneously stated in the *Règne Animale* to be without a tail. The length of a full grown male specimen is less than six inches, the females are not so large. The fur is soft and long, deep gray at the base, and white at the points in winter; the white being mottled in summer with black and reddish brown on the back, and with reddish brown on the under parts. The fore-feet have four toes with claws, and the rudiment of a fifth toe without a claw, at the hinder part of the fore foot.

8. *Bos MOSCATUS.* *Musk Ox.*

This species of ox inhabits the North Georgian Islands in the summer months, but being less numerous than the rein-deer, and more difficult to approach, three individuals only were killed, all of which were bulls. They arrived in Melville Island in the middle of May, crossing the ice from the southward, and quitted it on their return towards the end of September. The musk ox may be further stated, on Esquimaux information, to inhabit the country on the west of Davis' Strait, and on the north of Baffin's Bay: as a head and horns and a drawing of a bull being shewn to the Esquimaux of the west coast of Davis' Strait who were communicated with on the 7th of September, were immediately recognised, and the animal called by the name of Umingmack; this is evidently the same with the Umimak of the Esquimaux of Wolstenholme Sound, who were visited by the former expedition, and of which nothing more could be learnt at the time from their description than that it was a

large horned animal inhabiting the land, and certainly not a rein-deer. It is probable that the individuals which extend their summer migration to the north-east of Baffin's Bay, retire during the winter to the continent of America, or to its neighbourhood, as the species is unknown in South Greenland. There can be no doubt that it was the head of an animal of the present species which is described in the *Fauna Grænlantica* to have been conveyed on a piece of ice to the shores of Greenland and which is there erroneously conjectured to have belonged to the *Bos Grunniens*. It is a curious fact, however, that although none of the Greenlanders had ever seen the animal to which the head belonged, they should have given it the same name of *Unimak*, as is mentioned by O. Fabricius; this fact may seem to justify an inference that the animal itself was known to them by tradition; and may thus, in some measure, corroborate the general belief that their ancestors came from a country to the north and west of the one which they now inhabit.

The flesh of the bulls which were killed by the expedition was generally liked, although tasting strongly of musk. The weight of each individual exceeded 700 lbs., yielding about 400 lbs. of meat; the head and skin weighed 130 lbs.; they stood $10\frac{1}{2}$ hands high at the withers. A very correct representation of the bull is given in a plate, from a drawing of Lieutenant Beechey's.

The projection of the orbits of the eyes in this species is very remarkable, when compared with others of the same genus; it is probably a provision to carry the eye clear of the great quantity of hair which the severity of the cold renders necessary in such high latitudes.

9. CERVUS TARANDUS. *Rein-deer.*

Inhabit the North Georgian Islands in summer in considerable numbers, arriving towards the middle of May, and retiring to the south before the first week in October. In the course of the season 24 were killed, and afforded an agreeable supply of fresh provision to the ship's companies.

The species is too well known to require any further remark.

10. PHOCA VITULINA. *Common Seal.*

A seal was killed in Baffin's Bay whilst sleeping on a fragment of ice, which agreed in all respects with the description of the *P. Vitulina* in the *Fauna Grænlantica*, so far as it goes, the relative proportion of the toes not being noticed in that work. In this individual the middle toe of the fore flipper was the longest, the others on each side decreasing in length, so that the two exterior were half an inch shorter than the middle one. This formation does not agree with the general accounts of authors of the *P. Vitulina*, but is equally inapplicable to any other described species; it does not indeed accord with the generic character of the *Phoca* in the *Règne Animale*. In the hind flipper the exterior toes were the longest, and were connected by a thick membrane, containing three other slender and shorter toes.

A young seal, which was given by the master of a whaler to the officers of the *Alexander*, one of the ships on the former voyage, became so entirely domesticated and attached to the ship, that it was frequently put into the sea, and suffered to swim at perfect liberty, and when tired would return of itself to the boat's side to be taken in.

Seals were very abundant whilst the ships remained in Davis' Strait and Baffin's Bay; amongst them the *P. Barbata* and *P. Grænlantica* were believed to be recognised, but were not killed. Very few were seen after the entrance of the Expedition into the Polar Sea, in consequence of there being so little open water.

11. TRICHECUS ROSMARUS. *Walrus.*

A young male not full grown was killed in Davis' Strait, being in length, from the nose to the extremity of the hind flipper, ten feet three inches, and weighing 1,384 lbs. This animal is so well known that a particular description is unnecessary. The number of grinders were five on each side in

the upper jaw, and four in the lower. O. Fabricius and Cuvier describe only four in either jaw ; but Müller (Prodromus) mentions having seen a Greenland specimen with five in the upper. The eyes are prominent, rather than sunken, as stated by Pennant. It might also be erroneously inferred that the walrus has a tail, from an expression in the *Arctic Zoology*, " body very thick in the middle, lessening gradually towards the tail."

12. MONODON MONOCEROS. *Narwhal.*

An individual of this species was killed in Prince Regent's Inlet; the horn was unfortunately not perfect, a piece having been broken off the end by some accident; the part which remained was above four feet in length externally, the diameter at the insertion an inch and six-tenths, and at the broken end eight-tenths of an inch; the length of the animal from the insertion of the horn to the fork of the tail, thirteen feet five inches and a half; the spiracle at the summit of the head, fourteen inches and a half from the extremity of the snout, two inches eight-tenths in diameter, having a membrane in the interior, dividing it into two parts; the fins were two feet four inches and a half from the insertion of the horn, six inches and a half broad at the base, seven inches and a half in the middle which is the broadest part, and fifteen inches long; the skin half an inch thick, marbled black and white in the back, beneath white; the fins black.

Besides the twelve species of Mammalia which have been thus described, the *Balæna Mysticetus*, *B. Physalus*, and the *Delphinus Albicans*, were frequently seen, but no individual of either species was killed.

BIRDS.

On the return of the Expedition of 1818, an account of the various species of birds which had been seen during that voyage, was presented to the Linnean Society by Captain Sabine, and has been published in the 12th volume of their Transactions, being entitled, "A Memoir on the Birds of Greenland."

Many of the species seen in the present voyage having been already noticed therein, it has been considered preferable to refer to the Memoir in such cases, rather than to repeat the accounts which it contained; the reference being considered to imply the confirmation of subsequent experience; the new matter which this voyage has furnished, is given in the present account. The species which were not seen in the first voyage are described here on the same plan as on the former occasion, and the same authors are referred to.

Since the publication of the Memoir, Mr. Temminck has printed a second edition of his excellent work, the *Manuel d'Ornithologie de l'Europe*, much improved and extended. This edition has been consulted on the present occasion, and references to it are added in all cases.

1. STRIX NYCTEA. *Snowy Owl.*

Gmel. i. 291. Lath. Ind. i. 57. Syn. i. 132. Arct. Zool. no. 121. Wil. Am. Orn. iv. 53. Fabr. no. 36. Faun. Suec. 76. Temm. 82,

Several pairs of this species were seen during the summer months on the islands in the Polar Sea; but being very wary, and the country affording little shelter to the sportsman, only a single individual was killed.

It may be remarked, generally, of all the birds which frequent these islands in the breeding season, that they arrive in May, and depart with their young

broods in October, and that not a single species remains during the dreary season of winter.

An instance did indeed occur in February, of a bird being said to be seen by a sailor of the *Hecla*, who was walking on Melville Island at no great distance from the ships. He described it as a large white bird flying very near the ground. If it were indeed a bird, it was most probably a *striz nyctea*; but as neither this, nor any other individual were observed before or afterwards, until the general arrival in May, and as scarcely a day passed afterwards in which birds of this species were not seen, it seems reasonable to conclude that this solitary, and somewhat uncertain, instance does not justify an exception to the above general remark.

2. CORVUS CORAX. *Raven.*

Greenl. Birds. no. 3. Temm. 107.

Several pairs were seen at Melville Island; the individuals which were killed differed in no respect from the European specimens.

3. EMBERIZA NIVALIS. *Snow Bunting.*

Greenl. Birds. no. 5. Temm. 319.

Very numerous in the North Georgian Islands, where they are amongst the earliest arrivals; attempts were made to keep them on board in cages through the winter, but were unsuccessful; they soon became apparently reconciled to the confinement, but did not long survive the loss of liberty.

4. CAPRIMULGUS AMERICANUS. *Musquito Hawk.*

Wil. Am. Orn. v. 65. Arct. Zool. no. 387.

A female of this species was found on Melville Island, lying dead on the ground about a quarter of a mile from the sea. These birds are known to

breed and inhabit as far north as Hudson's Bay; but as they live principally in woods, and feed on mosquitoes and other winged insects, which are very rare in the North Georgian Islands, it is more than probable that the present individual was an accidental visitor, and had died from the want of food. It was extremely thin, but otherwise the plumage was in good preservation. Wilson's Plate and description of this species is most accurate; Fabricius does not mention it as known in Greenland.

5. TETRAO RUPESTRIS. *Rock Grouse.*

Gmel. 751. *Lath. Ind.* ii. 640. no. 11.—T. Lagopus. *Greenl. Birds.* no. 4. Temm. 468 ?—Rock Grouse, *Arct. Zool.* no. 184. *Lath. Syn. Supp.* i. 217.

In the description in the *Memoir on the Greenland Birds*, of the Grouse killed at Hare Island, it was observed that their plumage was in some respects different from the Scotch Ptarmigan, but the difference was considered as the effect of climate operating on one and the same species; the circumstance, however, of birds exactly similar to the Scotch Ptarmigan having been killed on the opposite coast of Davis' Strait, during the present voyage, has induced a closer investigation, and has led to the belief that two distinct species were confounded on the former occasion; the Scotch Ptarmigan and the birds which correspond in every respect with them and which inhabit the country on the south-west side of Baffin's Bay, being the Tetrao Lagopus of Gmelin; whilst the species found at Hare Island, and subsequently in great abundance in the North Georgian Islands is the Tetrao Rupestris of the same author, and the Rock Grouse of the Arctic Zoology, and is the subject of the present article.

This species undergoes the same changes from season as the T. Lagopus; in winter both sexes are white, with the exception of the tail feathers, and of a black bar from the bill through the eye, peculiar to the male. In this state, they arrived at Melville Island on the 12th of May; on the 31st, a female was killed, of which a great part of the white feathers of the head, neck, and back had moulted, and were replacing by coloured feathers, being

the first bird which was observed in change; by the end of the first week in June the summer plumage of the females was generally complete, and a change had commenced in a few of the males; some of the latter were however killed, as late as the middle of June, in which no alteration of their winter plumage had taken place. The distribution of the coloured plumage of summer corresponds both in the male and female with the Ptarmigan, the same parts of both species remaining white; but there is much difference in the colour itself; the upper plumage of the Ptarmigan is cinereous, with undulating and narrow black lines and minute spots, whereas in the Rock Grouse each feather is black, cut by transverse broad lines or bars of a reddish yellow, which do not reach on either side so far as the shaft, and have spaces of black between them, broader than the bars themselves; the feathers are tipped with a light colour in the male, approaching to white in the female. The tail consists of fourteen feathers, which do not undergo changes from season. In the greater number of individuals, the whole fourteen are black with white tips, but in occasional specimens, the two middle ones are entirely white, and in others partly black, and partly white; and this has been found to be the case in individuals of a pack, others of which had not the same peculiarities. It is, doubtless, in consequence of this accidental variation that "*rectricibus atris apice albis, intermediis totis albis,*" forms erroneously a part of the specific character of the *T. Rupestris* in Gmelin. The superior and inferior tail coverts are very long, exceeding occasionally the length of the tail itself; these feathers change from white in winter to the same colour as the upper plumage in summer.

The average length of the male specimens is $13\frac{1}{2}$ inches; of females $12\frac{1}{2}$; both sexes are inferior in size to the Lagopus; the two species resemble each other in the formation and colour of the claws and bill, and in the naked space above the eye, terminated by a dentated membrane, larger and more conspicuous in the male than in the female.

The ground colour of the egg of the Rock Grouse, is a pale reddish brown, irregularly blotched and spotted with darker brown.

The young in autumn resemble the summer plumage of the parents; but are not quite so regularly marked.

These birds are easily killed, especially in the breeding season, when the female will suffer herself to be taken on the nest. When in pairs the male will not quit the female on her being shot. They were killed in considerable numbers in Melville Island, as a supply of provision to the ships' companies.

This species is not found in the British Islands.

6. TETRAO LAGOPUS. *Ptarmigan*.

Gmel. 749. *Lath. Ind.* ii. 639. no. 9. *Fabr.* 80.—*Ptarmigan. Arct. Zool.* p. 315. *Mont. Orn. Dict. Lath. Syn.* iv. 741.

Inhabits the country South of Barrow's Strait and East of Regent's Inlet, but was not met with in the North Georgian Islands. It is the ptarmigan of Scotland. The specific character of the *T. Lagopus* of Gmelin, commencing with "*Cinereus*" marks it as referable to the present species, the coloured plumage of which in the summer season is cinereous, with minute black lines and spots, excepting in the head and neck, where it is rightly characterized by the same author, as marked with "broad bands of black, ferruginous, and white;" the white prevails in the throat, and the black and ferruginous in the crown and hind head.

This species has also fourteen black feathers with white tips, which undergo no change from season; it has also two additional middle incubent feathers, which the preceding species has not. These feathers are very variable in colour: in some specimens, both of summer and winter birds, they are white; in others, also of both seasons, they approach to black, with broad white tips; and in occasional summer specimens they are of the same colour as the upper plumage; these two feathers are exclusive of six long feathers of the superior (coverts, the outer ones being shorter than the others,) which are white in winter, and cinereous, waved with minute bars of black, in the summer.

This description includes all the specimens which have been examined, of both Scotch and Arctic birds; it agrees also with the account in Montagu of the individuals which had come under his notice from Norway and Scotland; but it does not agree with the specific character of the *Lagopus* given by Temminck "*dix-huit pennes à la queue*," of which the two middlemost are described as changing from season; nor does it precisely with Fabricius' description of his Greenland *Lagopus* in the *Faun. Græn. No. 80.*, where the intermediate and incumbent feathers are to be stated four instead of two; the number of the true tail feathers, however, corresponding with the present description. After a very careful examination of the accounts which these authors have given of the birds which they have respectively designated as *T. Lagopus*, it appears by no means decided to which species they refer, whether to the present or to the preceding; the "*dorsum et uropygium nigro cinerascensque undulata*," would seem to refer Fabricius' to the present species; whereas the description of both sexes in the summer plumage in Temminck's second edition very nearly accords with the birds which were obtained in Melville Island, and which are here considered the *Rupestis*; this opinion is considerably strengthened by the comparison of a specimen recently received from Mr. Temminck, as his European *T. Lagopus*, with the Melville Island birds, wherein no other difference is perceptible, than that the reddish-yellow markings are rather more vivid and predominant in the European specimen.

The males average fifteen inches, the females fourteen inches in length.

The *Tetrao Salicetti* of Temminck (*Albus* of Gmelin and other authors) is distinguishable from either of the species which have been now described, 1st. by its superiority in size; 2d, by the shape of the bill and claws, and by the colour of the latter, which is white in the *Salicetti*, and dark, approaching to black, in the *Lagopus* and *Rupestis*; 3dly, by the absence of the black line through the eye in the male; 4thly, by the general colour of the summer's plumage, which is deep orange in the *Salicetti*, crossed by narrow and waving black bars and spots on the back, and pure on the breast.

7. CALIDRIS ARENARIA. *Sanderling*.*Temm.* 524.

WINTER. *Tringa Arenaria*. *Gmel.* i. 680. *Wil. Am. Orn.* vii. 68. *Sanderling*. *Arct. Zool.* no. 403. *Lath. Syn.* v. 197. *Mont. Orn. Dict. & Supp.*

SUMMER. *Charadrius Rubidus*. *Gmel.* i. 688. *Lath. Ind. Orn.* ii. 740. *Wil. Am. Orn.* vii. 129.—Ruddy Plover. *Arct. Zool.* no. 404. *Lath. Syn.* v. 195. *Mont. Orn. Dict. & Supp.*

YOUNG. *Charadrius Calidris*. *Gmel.* i. 689. *Lath. Ind.* ii. 741.—*Sanderling*. *Lath. Syn.* v. 197. & *Supp.* 253.

Breed in considerable numbers on the North Georgian Islands: several pairs were killed at different periods of the breeding season, the males and females of which were invariably found to differ in their plumage; the general colour of the female being lighter, and having more cinereous and less of black and reddish marking than that of the male: this is especially the case in the chin, throat, and fore part of the neck; which may be described in the female as white, with a very slight sprinkling of dark spots, and scarcely any appearance of red; whereas, in the males, the dark colours greatly predominate. The quill feathers of both sexes, and of all the specimens, were reddish-brown in those parts of the birds, which are usually described by some authors as being black.

8. CHARADRIUS PLUVIALIS. *Golden Plover*.*Temm.* 535.

WINTER. *Gmel.* i. p. 688. *Lath. Ind. Orn.* ii. 740. *Syn.* v. 193. *Arct. Zool.* no. 399. *Wil. Am. Orn.* vii. 71. *Faun. Suec.* no. 190.

SUMMER. *C. Apricarius*. *Gmel.* i. 687. *Lath. Ind. Orn.* ii. 742. *Fabr.* no. 79. *Wil. Am. Orn.* vii. 41. *Faun. Suec.* no. 189.—*Alwargrim Plover*. *Lath. Syn.* v. 198. & *Supp.* i. 252. *Arct. Zool.* no. 398. & *Supp.* 69.

Breeds in the swampy parts of the North Georgian Islands in considerable abundance. In the young birds, killed in the latter part of August and in September, the colours of the head and upper plumage were scarcely less vivid than in their parents; the neck and breast being an obscure but pale cinereous brown, on which the future spotting was just discernible; the

whole inferior plumage was a very faint brown, without the mixture or appearance of black feathers in a single instance.

9. CHARADRIUS HIATICULA. *Ring Plover.*

Greenl. Birds. no. 10. Temm. 539.

Abundant on the shores of Possession Bay and of Regent's Inlet. The individuals which were killed corresponded to the description of Temminck, except that the colour of the tail feathers was pale-brown at the base, differing in shade into almost black; the outer feather on each side, both shaft and web, being a pure white, as well as the tips of the whole twelve.

10. STREPSILAS COLLARIS. *Turnstone.*

Temm. 553.—Tringa Interpres. Gmel. i. 671. Lath. Ind. ii. 738. Wil. Am. Orn. vii. 32. Fab. no. 74. Faun. Suec. 178. Brün. 175.—Turnstone. Lath. Syn. v. 188.—Hebridal Sandpiper. Arct. Zool. 382.

YOUNG. *Tringa Morinella. Gmel. i. 671. Lath. Syn. v. 189. Varieties of the Turnstone.*

Breeds in the North Georgian Islands. The specimens which were killed agreed in all respects with the description of the full-plumaged bird in Temminck and in Wilson. The peculiarity in the hind toe of this species seems to have escaped the observation of the generality of authors; Wilson being the only one, amongst those who are referred to above, who has noticed it. It turns inwards, instead of taking as is usual, a straight direction backwards.

The legs are deep orange-red during the height of the breeding season.

11. TRINGA VARIABILIS. *Dunlin.*

Temm. 612.—Tringa Alpina. Greenl. Birds. no. 9.

Rare on the coast of Davis' Strait and of Baffin's Bay, and in the islands of the Polar Sea. The specific name of Alpina, by which this species was distinguished in the *Memoir on the Greenland Birds*, has been changed to Variabilis,

which is a more appropriate name, and is adopted by Mr. Temminck in his second edition, where the history of its various states of plumage is correctly given, and the errors pointed out into which preceding naturalists, with the exception of Montagu and Wilson, had fallen.

12. TRINGA CINERIA. *Knot.*

Greenl. Birds, no. 8. Temm. 627.

Breeds in great abundance on the North Georgian Islands. In the individuals killed in the height of the season the red of the breast was fully as deep as in the plate in Wilson's *Am. Orn.*, and extended invariably to the under tail coverts, being very sparingly marked with white on the abdomen, and with a few longitudinal black streaks. The hind toe of the Knot is directed inwards, as is that of the Turnstone.

13. TRINGA MARITIMA. *Purple Sandpiper.*

Greenl. Birds, no. 7. Temm. 619.

Abundant on the coast of Davis' Strait and of Baffin's Bay, where it breeds; but was not met with in the islands of the Polar Sea. The history of its different states of plumage is correctly given in the second edition of the *Manuel d'Ornithologie*. It may be stated, in addition, that the young birds which were killed shortly after they quitted the nest, had the feathers of the back and scapulars edged with white, changing gradually as the season advanced into an approximation to the clear red, which is described as the marking of the bird of the first year. The change takes place in the scapulars earlier than in the feathers of the back.

14. PHALAROPUS PLATYRYNCHOS. *Flat billed Phalarope.*

Greenl. Birds, no. 12. Temm. 712.

Abundant during the summer months on the North Georgian Islands: the

difference in the size of the sexes, and of their plumage in the breeding season, appears to have been hitherto unnoticed ;

	Ins.	Ins.	Oz.
The males average in length	7.6,	in extent 16.2,	and in weight 1½.
The females	8.4,	17	2.

The breeding plumage of the male corresponds minutely with the description which Temminck has assigned to both sexes : the female has the forehead, crown, and hind-head a uniform deep sooty black, without intermixture of orange or red : the band which passes through the eye is a pure white, and is larger and better defined than in the male, including more space above and in front of the eye ; the black predominates in the back and scapulars, the orange bordering of the feathers being smaller and much lighter than in the male ; the under plumage is of a deeper and richer brick-red colour, and is unmixed with white feathers for a much longer portion of the season : the female bird attains her perfect plumage earlier in the year, and retains it longer than the male, which is also the case with several other of the northern birds.

15. STERNA ARCTICA. *Arctic Tern.*

Temm. 742.—*Sterna Hirundo.* *Greenl. Birds.* no. 17

In the *Memoir on the Birds of Greenland*, it was remarked that a difference existed between the Terns of that country, and those of the European coasts, in the bill and legs ; the bills of the former being one-third shorter, and their tarsi only half the length of those of Europe. Although this difference was considered sufficient to have justified a specific distinction, the name of *Sterna Hirundo* was still retained in the memoir, from the conviction that the errors which arise from a hesitation to create new species, are less injurious to natural history, than those which result from the opposite practice. Mr. Temminck, however, whose very extensive experience gives confidence to his decisions, has treated them as distinct species, in his second edition ; and in reliance on his authority, the name of *Sterna Arctica* has been adopted

for the northern species. Two immature specimens of the *S. Arctica* were killed on the 8th of July from amongst a large flock of full-plumaged birds, and may supply a description of a bird of the first year; bill black, the lower mandible having a reddish tinge, especially near the edges, and at the base; forehead, throat, neck, and inferior plumage, white, very slightly tinged on the breast and belly with a faint ash-colour. The cap mottled black and white, the upper plumage ash-colour, the wing coverts indistinctly mottled with brown, the outer web of the first primary quill feather velvet black at the base, shading into ash-colour towards the point, a portion of the inner webs near the shaft is of a deeper shade than the remainder; the outer feathers of the tail exceed the middle ones in length three inches; the scapulars and secondaries tipped white; the colour of the legs in process of change from black to red.

The middle claw of this species, as well as of the *S. Hirundo*, is much longer than the other claws, and is curved laterally outwards.

16. *LARUS GLAUCUS*. *Glaucus Gull*.

Greenl. Birds, no. 19. *Temm.* 757.

This fine species of gull is as numerous in the Polar Sea, as in Baffin's Bay and Davis' Strait, occupying with their nests the pinnacles of rocks and the projecting ledges of cliffs on the sea-shore. In the *Memoir on the Greenland Birds*, it is stated to be somewhat inferior in size to the *L. Marinus*, whereas in Temminck's second edition, the *Glaucus* is called the largest of known gulls. In comparing the size of many specimens of both species, the average is in favour of the *Marinus*; but by far the largest individual of either is a *Glaucus* killed on the north shore of Barrow's Strait, being in length 32 inches, in extent 65 inches, and weighing 4 lbs. 3 ozs. The tarsus was 3.4 inches, and the bill exceeded 4 inches, prodigiously strong and arched; the upper mandible overhooking the lower more than is customary. It was a male bird.

There appears a considerable variation in the size of individuals, in all the larger species of gulls.

17. *LARUS ARGENTATUS. Silvery Gull.*

Greenl. Birds. no. 20. Temm. 764.

In the *Memoir on the Birds of Greenland*, the species described under this name was identified on the authority of Mr. Temminck with the common herring gull of our coasts; the absence of the black markings of the primary quill feathers, which alone constitutes the distinction between them, being considered by that eminent naturalist as a variation of plumage occasioned by climate: thus the *Larus Argentatus* was made to comprise two varieties, one peculiar to the Greenland seas, having the quill feathers a very faint ash-colour, with the ends and under parts white, without the admixture of black; and the other the common herring gull. The present Expedition has furnished an instance which may be considered to confirm Mr. Temminck's decision; amongst a number of the Greenland variety which had their nests on a cliff on one of the North Georgian Islands, one individual was observed to have black markings on the wings, and was fortunately secured: on comparing this specimen with birds which have been killed on our own coasts, the black markings of the quill feathers are found to correspond precisely in shape and situation; the only perceptible difference being that the dark colour is not quite so deep in shade in the Polar as in the European specimens.

18. *LARUS EBURNEUS. Ivory Gull.*

Greenl. Birds. no. 21. Temm. 769.

A fine specimen of a bird of the first year was killed in Davis' Strait on the 14th of September, having all the immature markings of the individual described by Temminck as shot in Switzerland in March, with the addition of numerous spots on the shoulders and spurious wings; this species

which is so common in Davis' Strait and Baffin's Bay, was rarely seen in the Polar Sea, on account, probably, of there being less open water, and consequently greater difficulty in obtaining a supply of food.

19. *LARUS TRIDACTYLUS*. *Kittiwake Gull*.

Greenl. Birds. no. 22. Temm. 774.

These, like the preceding species, were very rarely seen in the Polar Sea; so late in the season as the 17th of July, an immature bird was killed in Davis' Strait, having very slight remains of the circle round the neck, and of the mottled head, but retaining the markings of immaturity on the coverts of the wings, and at the tips of the tail feathers, as decidedly as in winter specimens. Adult specimens had been killed on the eighth of July, in the perfect plumage of summer.

20. *LARUS SABINI*. *Fork-tailed Gull*.

Greenl. Birds. no. 23.

One of these gulls was seen on the wing in Prince Regent's Inlet in August, and was pursued, but without success; it was, however, identified with certainty by the persons who had been present on the former Voyage, when they were first met with.

The history of this species presents a remarkable instance of confined locality; in the account which is referred to, it is stated to have been found on three small islands in Baffin's Bay in latitude $75\frac{1}{2}^{\circ}$, breeding in great numbers in company with terns, and to have been previously unknown to Saccheus, the Esquimaux interpreter, who was well acquainted with the birds of his native country, namely, of Greenland south of Disco, where it is therefore presumed to be unknown; there are few parts of the coasts of Baffin's Bay or of Davis' Strait, which have not been visited by either the present or the former Expedition, but in no instance have these birds been met with before or since, with the exception of the one individual in Prince Regent's Inlet; their

winter residence is entirely unknown, nor can any of the descriptions of new or doubtful species of gulls which have been killed on passage in America, be considered to belong to the present species in any possible variation of its plumage; the characteristic marks are peculiar and distinctive.

Besides the specimens which were brought to England in 1818, one only is known to exist in any collection; namely, the one which on Mr. Temminck's information has been stated to have been presented to the Museum at Vienna by Sir Charles Giesecke, but of which no account has hitherto been published; it is not known, therefore, from whence this specimen was obtained, especially as the existence of an undescribed species of gull is not noticed in Giesecke's enumeration of the birds of Greenland published in Brewster's *Cyclopædia*, nor in his MSS. list in the possession of Mr. Bullock. The three islands above-mentioned, are therefore as yet the only land which these birds are known to inhabit.

21. *LESTRIS PARASITICUS. Arctic Lestris.*

Greenl. Birds. no. 24. Temm. 796.

Is equally abundant in the islands of the Polar Sea as in Baffin's Bay; and is frequently met with inland, seeking its food along the water-courses which occupy the bottom of ravines; differing in this respect from the next species which is more exclusively a sea bird.

22. *LESTRIS POMARINUS. Pomarine Lestris.*

Temm. 793.

Several individuals, corresponding in all respects with the description referred to, were killed in Prince Regent's Inlet; both species of *Lestris* were also seen at Melville Island, but the *Pomarinus* more rarely than the *Parasiticus*.

23. *PROCELLARIA GLACIALIS. Fulmar Petrel.*

Greenl. Birds. no. 25. Temm. 803.

24. ANAS CYGNUS. *Wild Swan.*

Gmel. i. 501. *Lath. Ind. Orn.* ii. 833. *Temm.* 829. *Faun. Suec.* 107. *Brün.* 44.—*Wild Swan, Syn.* vi. 433. & *Supp.* i. 272. *Arc. Zool.* no. 469. & *Supp.* 75.

Breeds in the North Georgian Islands, but is by no means numerous, and a single specimen only was obtained; this individual corresponds with the accounts of authors, excepting that the white plumage of the breast and thighs is intermixed with the same yellow feathers as on the crown and hind head, though not quite so deep in colour. Those of the crown are rather golden than yellowish as they are usually described.

25. ANAS BERNICLA. *Brent Goose.*

Gmel. i. 513. *Lath. Ind. Orn.* ii. 844. *Wil. An. Orn.* viii. 131. *Fabr.* 41. *Faun. Suec.* 115. *Brün.* 52. *Temm.* 824.—*Brent Goose. Syn.* vi. 467. *Arc. Zool.* no. 478.

Breed in great numbers on the islands in the Polar Sea. The plumage of the female is less vivid during the height of the season than that of the male; she is also rather smaller, the average difference in their length exceeding an inch.

26. ANAS SPLECTABILIS. *King Duck.*

Greenl. Birds. no. 26. *Temm.* 851.

This species as well as the preceding are very abundant in the North Georgian Islands, having their nests on the ground in the neighbourhood of fresh water-ponds, and feeding on the aquatic vegetation. The egg is shorter than that of the Eider Duck, rather broader across in the widest part, and more tapering; of a cinereous olive colour, not whitish, as stated erroneously by Montague, but less green than the egg of the Eider. Mr. Temminck's description of the male bird is generally correct; but he has omitted to notice the peculiarity of the tertial feathers of the wing, which curve outwards in a remarkable manner over the primaries; nor can the colour of the wings be called a deep black, being ferruginous, especially in the inner webs.

The plumage of the female very much resembles that of the female Eider, but the two species may be always distinguished by the bill, the gibbous part of which is arched on the top in the King, and flattened in the Eider. The bill of the latter is also longer, and the feathers on the side of the upper mandible extend as low down as they do on the lower mandible, which is not the case in the King Duck. The colours of the plumage of the head and neck of the Eider nearly correspond with those of the body, whereas in the King they are much lighter. Some of the female Kings which were killed had the whole of their under parts an uniform dark brown, whilst others had more or less of dark markings on a lighter ground. The hind toes in both sexes are smaller than those of the Eider.

A young male was killed, towards the end of September, which bore the same resemblance to the female as the young male Eider does to the female of its own species.

27. *ANAS MOLLISSIMA. Eider Duck.*

Greenl. Birds. no. 27. Temm. 848.

Is abundant on the shores of Davis' Strait and Baffin's Bay; but, deriving its food principally from the sea, was not met with after the entrance of the ships into the Polar Ocean, where so little open water is found. The females were without the white bands on the wings, which are described by authors.

28. *ANAS GLACIALIS. Long-tailed Duck.*

Greenl. Birds. no. 28. Temm. 860.

Breeds in the North Georgian Islands, but is not common there. A male bird was obtained in June, corresponding precisely with the individual killed in Baffin's Bay in the summer of 1818, which furnished the description of the full-breeding plumage in the *Memoir of the Greenland Birds*. An account of this state of plumage is yet wanting to complete the history of this species in Mr. Temminck's second edition. The plumage of a young male, killed

on the 22d of June, corresponds precisely with Mr. Temminck's male of one or two years old.

29. *COLYMBUS SEPTENTRIONALIS. Red-throated Diver.*

Greenl. Birds. no. 10. Temm. 910.

Breeds in the neighbourhood of fresh water-ponds on the shores of Baffin's Bay and Davis' Strait. The young birds, killed in September, were in the plumage in which they have been called *C. Stellatus*. But when nestlings, the feathers of the back, scapulars, and wing coverts were margined with white.

30. *URIA BRÜNNICHII. Brünnich's Guillemot.*

Greenl. Birds. no. 14. Temm. 924.

In the account of this species in the *Memoir of the Greenland Birds*, an inference was drawn that it undergoes the same changes of plumage from season as the *U. Troile*. This inference has been subsequently confirmed: the specimens which were killed early in June having the throat and neck white, unmixed with black. Towards the end of June the change was in progress; and, by the second week in July, as many were found in perfect summer plumage, with black throats and necks, as were still in change.

In Temminck's second edition he has omitted to notice the yellow margin of the upper mandible of the bill, a peculiarity which serves well to distinguish this species from the *U. Troile*. In the living bird, and in the height of the summer season, the colour is a deep yellow; though in preserved specimens it appears much fainter, and approaching to horn. Both the *Uria Troile* and *Brünnichii* are found on the shores of the northern seas of Europe: but the *Troile* is not known to inhabit those of North America.

31. *URIA GRYLLE. Black Guillemot.*

Greenl. Birds. no. 15. Temm. 925.

These birds, which are so numerous in Davis' Strait and Baffin's Bay, were rarely seen in the Polar Sea.

32. URIA ALLE. *Little Auk.*

Temm. 928.—Alca Alle. *Greenl. Birds.* no. 13.

The reasoning on which Temminck has been induced to alter the generic name of this species is satisfactory ; the bird does not, indeed, wholly accord with the characters either of the Alca or Uria, being intermediate between them ; but it appears preferable that it should be ranged under the latter. This species, as well as the preceding, is not common in the Polar Sea : its great breeding station is in the northern part of Baffin's Bay.

These thirty-two species comprise the whole of the birds which were seen within the Arctic circle under circumstances which admitted of their being identified ; and are exclusive of a species of *Numenius*, three individuals of which flew past one of the ships' boats in Prince Regent's Inlet ; and a species of *Hirundo*, (possibly *Riparia*,) which the Serjeant of Artillery, who had a good knowledge of birds, stated that he saw on two occasions in the excursion across Melville Island, in June, 1820.

In the *Memoir on the Greenland Birds*, fifty-four species were enumerated, as comprehending the whole of those which have been described by authors to inhabit Greenland and its coasts ; the present voyage has added one species to this list, the *Alca Tinnunculus*, an individual of which flew off to the ship, when passing Cape Farewell on the passage home, and was killed.

The *Procellaria Puffinus*, which had escaped notice on the first voyage, was also seen in great abundance off Cape Farewell ; it is the bird which is called by the Whalers the Cape Hen : these two species are not included in the present account, which is limited to birds seen within the Arctic circle.

F I S H.

SALMO ——— ?

Two individuals of a species of salmon were brought from a lake, supposed to be about 20 miles distant from the sea, by the party who lost their way, and were absent four days on an excursion in Melville Island in September, 1819; they described the lake as abounding in similar fish, of the same size as the specimens, which were three inches in length; the situation of the lake, and its direction from the ships were unfortunately so uncertain as to defeat all subsequent research. The specimens, having been several hours in the pocket of one of the party, who were unprovided with conveniences for their better conveyance, were not in a state to justify the assignment of a specific name or character. The colour appeared to have been a silvery white, pure beneath and marbled above the lateral line by very minute dark spots arranged in clusters, very thick around the eyes, and on the points of the upper and lower jaw; the nose rounded and blunt, the upper jaw rather exceeding the lower; gill covers in two pieces, membrane eight rayed; the ventral fin opposite to the middle of the first dorsal; the tail tolerably forked. P. 13. v. 9. A. 10. D. 11. C. more than 30.

The species seems to be nearly allied to the char (*S. Alpinus*); but the nose is more obtuse, and the tail more forked.

MERLANGUS CARBONARIUS. *Coal Fish.*

Taken by the trawl on the west coast of Davis' Strait; specimens from four to five inches long.

MERLANGUS POLARIS.

Caught in a net whilst swimming on the surface amongst ice in Baffin's Bay;

in length between five and six inches: it is the same fish, of which an individual was brought home by the former expedition, and was named by Dr. Leach. This species is very nearly allied to the *Gadus Virens* of authors, from which, however, it may be distinguished by the third dorsal fin being larger than the two anterior, whereas in the *Virens* the middle one is the largest: the lower jaw also rather exceeds the upper; the tail is slightly forked.—D. 14, 16, 19. P. 18. V. 6. A. 17, 22. C. 42.

MERLANGUS ——— ?

Three individuals, fifteen inches in length, of a species of *Merlangus*, were found in the ice which covered the harbour in which the ships wintered; they were frozen in the ice near its surface, and it was supposed must have been dead on the water when the frost set in; they were so much decayed that it was not possible to identify the species. The lower jaw was observed to exceed the upper a very little; both jaws were armed with teeth, the hinder ones of the lower jaw being tricuspidate; it could not be determined whether the species is cirrated.—P. 18. V. 6. D. 13, 19, 20. A. 20, 20. C. 40.

LIPARIS COMMUNIS.

Several individuals were taken in the trawl on the west coast of Davis' Strait, in latitude 70 degrees. They differed in no respect from the unctuous Sucker of our coasts.

BLENNIUS POLARIS.

B. imberbis, pinnis anali, caudali, dorsalique, unitis.

The individual here described was found on the shore of North Georgia, where it had been left by the ebb tide, in September 1819. It bears a very near resemblance to the description and figure of the *B. Viviparus*, in *Muller's*

Zool. Dan. v. 2, p. 22, pl. 57, but differs in the following particulars: the dorsal fin is united to the anal and caudal; the pectoral fin is not orbicular, as its length exceeds twice its breadth; the number of rays 15. The teeth, though small, are sufficiently conspicuous to the naked eye; the colour a yellowish ground, lighter under the belly, having eleven large saddle-shaped brown markings across the back; the middle of these markings being much lighter than their edges, the whole back and sides have a marbled appearance; the yellowish ground, when viewed in a microscope, is thickly sprinkled with minute black spots. No scales were detected by the microscope, but they may possibly have been removed with the sand which had adhered to the mucous coating of the skin, and which was washed off. Length seven inches. The upper jaw projects rather more than the plate of the *B. Viviparus* in the *Zool. Dan.* Ventral fins of two spines enclosed in a lax skin. This species is distinguished from the *B. Lumpenus*, by the union of the dorsal and caudal fins, and by the upper jaw being considerably longer than the lower; and from the *B. Ocellatus*, *Mém. de Peters.* t. 3, pl. 8, f. 2, by the ventral fins which are wanting in the *Ocellatus*, as well as by the absence of the spots on the dorsal fin of the latter.

COTTUS QUADRICORNIS.

Two individuals of this species, from five to six inches long, were the only produce of the Seine at Melville Island. They agreed in all respects with the description and plate of the *C. Quadricornis* in the *Ichthyology of Block*, vol. 3, page 146, plate 108.

COTTUS POLARIS.

C. imberbis, capite spinis duabus, operculis spinis quatuor, armatis.

A species of *Cottus*, similar in its habits to the *C. Gobio*, was very abundant on the shores of North Georgia, inhabiting the pools of water left by the ebbing of the tide, and the mouths of the small rivulets by which the snow on melting found its way to the sea; the largest individual did not equal

two inches in length ; the head is more compressed, and not so much flattened as in the preceding well-known species, and is armed with two strong spines directed backwards, placed before and between the eyes ; the gill covers are also each armed with four strong spines ; the pectoral fins are larger in proportion than those of the *Gobio*, and the upper jaw rather exceeds the lower ; the lateral lines are furnished with a series of small tubercles directed backwards ; colour light, with clusters of minute dusky spots. D. 6, 13. P. 15. V. 5. A. 14. C. 14.

SPECIMENS of the very few insects which were seen by the Expedition whilst within the Arctic Circle, having been sent to the Rev. William Kirby, of Barham, Suffolk, the following account and description of them have been received from that gentleman :

“ Otho Fabricius, in his *Fauna Groenlandica* (if we exclude the *crustacea*,) has described only 79 species of insects and *Arachnidæ*, and of *insects proper* only 63, which he collected during a residence of six years in West Greenland ; and Professor Hooker speaks of those of Iceland as being very few in number (*) ; it was therefore to be expected that in a station more than ten degrees to the northward of the theatre of their researches, the numbers of the insect world would be very greatly reduced ; and it will not excite much surprise, that only six species should have been collected in that high latitude, from the beginning of September to the beginning of August, the period during which the Expedition remained in Winter Harbour. It is probable, however, that some may have escaped observation, and others might possibly make both their annual appearance and retreat during the month of August. The birds also that frequent the island have, doubtless, their

(*) *Recollections of Iceland*, 1st edit. 272.

parasites, and the rein-deer would be annoyed, it is not unlikely, by its peculiar winged pest, *Æstrus Tarandi*.

" In Greenland, every order of insects has its representatives, except *Orthoptera* and *Hemiptera*; but, in Melville island, besides these, no *Coleopterous* or *Neuropterous* species was observed, and even the mosquito (*Culex* Linn.), the torment of the Laplander and Greenlander, as well as of the native of tropical regions, appears not to have extended there its annoying reign.

Order LEPIDOPTERA.

Genus BOMBYX. *Fab.*

" *Sabini*. B. cinereous, wings incumbent, antennæ of the male setaceous, bipectinate at the base, with short rays.

Expansion of the wings *one inch*.

" *Descr. MALE*. The whole body of this insect is of a uniform cinereous or fusco-cinereous colour, except that the under side of the wings is rather paler than the upper. Tongue rather long, like that of a *Noctua* or *Phalæna*. Feelers recurved, very hairy, consisting of two joints? Antennæ setaceous bipectinate for about half their length, with a single pair of short rays emerging from each of the branching joints, the other joints are hairy underneath. Wings incumbent, rather longer than wide, fringed at the end. Tibiæ armed in the middle with a long spur. Abdomen thickish, tufted at the end. Anal forceps, consisting of two horny concavo-convex reddish pieces, dilated at the top, and rounded.

" According to the modern system, this species might probably be regarded as belonging to a new genus, but the specimens are too much injured to enable me to get a clear idea of the Palpi—if admitted as such, it might be named *Psychophora*. From the length of the tongue it seems to come between the other *Bombycidæ* and *Noctua*, though in habit and stature it approximates to *Phalæna* Fab. It was found in a swampy part of Melville Island.

" Two or three specimens of a caterpillar were obtained in Melville Island, one of which was brought to England;—" They were found wandering

in the neighbourhood of *Salix arctica* and *Saxifraga oppositifolia*; it does not appear to belong to the moth just described, being, apparently, too large. It is of that tribe of caterpillars which Reaumur calls *Chenilles à broses*, the perfect insects of which constitute the genus *Larva* of Schrank, for instance, *Bombyx fascelina* Fab., &c., It has six true legs, and ten spurious or membranaceous ones, (*Propedes* Kirby and Spence.) The body is thickly covered with very long hairs of a dirty tawny colour; in the middle of the back are three small pale orange brushes, just before which is a long black one, or rather three confluent black ones, and another of the same colour at the tail, all forming pencils of longer converging hairs. It appears not to have arrived at its full size.

Order HYMENOPTERA.

Genus BOMBUS. Latr. Fab. (*Bremus* Jurine, *Apis*. * * c. 2. Kirby.)

“ *Arcticus*. B. black, with the base and apex of the thorax and the anterior half of the abdomen pale yellow.

Length of the body, $\frac{2}{3} \frac{11}{7}$ } Lines.

Synonym. *Apis alpina*, O. Fabr. *Fn. Grænland*. 155.

“ *Descr.* FEMALE. Body covered with long black hairs, but those that clothe the base and apex of the thorax, and the anterior half of the upper side of the abdomen, are of a pale yellow. Some black hairs are visible at the base of the last yellow segment of this part of the body. The antennæ are as long as the head. The wings are a little tinged with brown, and their nervures are black. The tarsi are covered with short reddish hairs.

“ MALE much smaller than the female. The hairs of the whole trunk, or intermediate segment of the body, are pale yellow intermixed with some black ones. The legs, also, particularly the anterior pair, are clothed with long yellowish hairs. The antennæ, which have a joint more than those of the female, and are considerably longer than the head, and the smaller mandibulæ

prove this specimen to be a male, but the posterior tibiae are without hairs upon their surface, and are fringed with long ones, forming what Reaumur calls the *Corbeille*, (*Corbicula* Kirby,) usually peculiar to the females, in which they carry the masses of pollen-paste, which is the reverse of what is observed in other male humble bees.

" The insect before us differs so slightly from the description which O. Fabricius has given of that which he mistook for the *Apis alpina* of Linné, that there can be little or no doubt of their identity. He confesses that his specimens (and this bee appears to have abounded in West Greenland, as it was also observed to do in Melville Island, and wherever the expedition landed within the arctic circle) did not in all things agree with the characters assigned to that species. But he states, that as Linné had seen only a single specimen, he did not think himself at liberty to make a new species on account of an insignificant difference. Although, however, Linné had seen this bee only once, it has since been more frequently taken, and having received specimens of it from Sweden, through the kindness of Major Gyllenhal, which agree with the Linnæan description in every point but size, (a circumstance easily explained by supposing the original specimen a queen, and those sent to me neuters,) can venture to assert that the two insects are perfectly distinct. *Bombus alpinus* is entirely black, with the upper side of the abdomen, all but the base, covered with orange-coloured or ferruginous hairs. The antennæ, also of the female or neuter (an important distinction in a genus, the species of which are usually only distinguished by the colour of their hirsuties) are proportionally shorter, and the short hairs that cover the tarsi are black.

" Scarcely any genus of the insect creation has so large a range as this of *Bombus*. It is found in the old world and in the new, and from the limits of phænogamous vegetation to the equator, but its metropolis appears to be within the temperate zone. The range of the species in question seems limited by the arctic circle, and to go from Greenland only westward, for it does not appear to have been seen in Lapland or Iceland (*), or other eastern parts of that circle.

(*) Hooker's *Recollections of Iceland*. 1st Edit. 34.

Order DIPTERA.

Genus CTENOPHORA, Meigen.

“ *Parii*. Ct. black, wings brownish, with a white marginal spot towards the apex, surmounted by a black one, tip of the margin of the abdominal segment pale.

Length of the body, $5\frac{1}{2}$ Lines.

“ *Descr. FEMALE*. Body blackish, with a tinge of slate colour, with the abdominal segments tipped with pale. Antennæ shorter than the thorax, subse-taceous, serrated. Wings brownish towards their apex, at the exterior margin is a white spot crowned by a black one. Legs long and slender.

“ The male of this species has probably bipectinate antennæ. *Tipula pectini-cornis*, Linn. is congenerous with it. This insect abounded about pools of fresh water.

Genus CHIRONOMUS, Meigen.

“ *Polaris*. Ch. black, abdomen hairy, wings lacteous.

Length of the body 4 Lines.

“ *Descr. MALE*. Body of a deep black, somewhat hairy. Antennæ plumose. Wings a little shorter than the body, of a milky hue, but reflecting the prismatic colours, with the marginal nervures black, abdomen slender and more hairy than the rest of the body. This species is nearly related to the *Tipula stercoraria* of De Geer, but is more than twice its size.

“ The two insects last described seem to replace the hosts of gnats, (*Culex*) that are so troublesome, even in high latitudes, to navigators. The species of the *Chironomus* genus, in particular, in this country, often appear dancing in the sun-beams in the depth of winter, when the *Culex* is torpid; it was therefore to be expected that their range would approach nearer to the poles than that of *Culex*. The species here described is larger than most of the southern ones that I have seen.

" Besides the above insects, a very minute spider was seen in abundance, running over the plants, and on the ground, and leaping when alarmed. I have seen only a single specimen, which was so much injured that I cannot be positive as to the genus, but from its jumping, it most probably is a species of *Salticus*, Lath. (*Attus* Walck). I, at first, took it for a variety of *Aranea rufipes*, (O. Fabr. 206); but as the characters *glaberrima*, *pedibus testaceis*, do not agree with it, it may be considered as a new species.

Melvillensis. S. black; legs piceous, hairy; abdomen hairy.

Length of the body about $1\frac{3}{4}$ lines.

This was the only species which Captain Sabine observed on the island."

INVERTEBRATE ANIMALS.

THE Genera, into which the several species of invertebrate animals have been distributed, are those of the system of the Chevalier de Lamarck, *Histoire Naturelle des Animaux sans Vertèbres*.

The object which has been chiefly attempted in the present account, has been to identify those species which have been previously described, and to compare the individuals with the descriptions of original observers, referring to the works in which they are noticed, and marking any differences which may have appeared in the comparison; and to furnish descriptions of the previously *unknown* species, sufficiently extended to enable the several systematic writers to arrange them in Genera according to their respective views and systems.

BEROE OVUM.

Faun. Græn. No. 355.

Baffin's Bay ; not unfrequent, but very delicate in texture, and difficult to procure for examination without injury. This species is easily distinguishable from others, as well by its very long cirri, as by the inequality of its ribs and their included sides ; the body being laterally compressed, and the ribs on the compressed sides (two in each) smaller than the others, and ending before they reach the terminal apertures ; whereas the four ribs between which the uncompressed sides are included, have no termination, but run into each other, completing the circumference ; the openings into the central internal cavity are between the latter.

In a note in the *Règne Animal*, 4, 59, it is supposed that the Beroe Ovum of O. Fabricius, and the Medusa Pileus of Gmelin, are the same species ; but the abovementioned particulars (which are also noticed by Fabricius,) distinguish them apart, and place the B. Ovum in a different subgenus of the *Règne Animal*, viz., the Callianire of Péron.

BEROE CUCUMIS.

Faun. Græn. No. 353.

Common in Baffin's Bay, and on the coast of New Georgia ; agreeing in all respects with the description in the *Faun. Græn.*, except that Fabricius has omitted to mention the lateral openings of the ovaries. This species is well distinguished from others by the absence of cirri, by its red colour, caused by innumerable minute red spots on the surface of the internal cavity seen through its transparent body ; and by the ribs, as well as the sides between them, being similar and equal, the former running into and ending in the terminal apertures.

BEROE PILEUS.

*Faun. Græn. No. 354.*Beroe Globuleux. *Encycl. Méth. Pl. xc. f. 3, 4.*

In Davis' Strait and Baffin's Bay ; frequently rising to the surface amongst ice, having eight ciliate ribs most beautifully resplendent with green and red.

DIANÆA GLACIALIS.

Plate 1, fig. 1.

D. campanulata, pistillo ore quadrangulare, costis quatuor cirri-productis.

In Baffin's Bay and the adjacent seas, but rare ; body hyaline, campanulate, the margin not ciliate ; length usually under half an inch, and the diameter under a quarter of an inch ; peduncle tubular, flesh-coloured, capable of extension to more than twice the length of the body, enlarged and quadrangular near the mouth which distends to receive its prey ; from the base of the peduncle proceed four delicate blood-red costæ, terminating at the margin in soft granular cirri, which can be extended at pleasure to more than an inch in length, or contracted to less than a quarter.

This species is allied to the *Dianæa digitala* (*Medusa Digitale*, *Faun. Græn. No. 361.*) and still nearer to the *D. Papillata*, (*Medusa Papillata*, *Zool. Dan. 4. 24., tab. 140.*) but the margin is without the cilæ of the former, or the globes of the latter. It falls under the Genus *Geryonia* of Péron, *Ann. du Muséum.*

CYANEA ARCTICA.

Lam. v. 2. p. 519. Medusa capillata, Faun. Græn. No. 358.

Is frequent in Barrow's Strait and in the Polar Sea, varying considerably in size, being usually from seven to nine inches in diameter ; a small space of open water being made by the removal of the ice in Winter Harbour in the month of May, several individuals rose immediately to the surface, which were

observed to differ from each other in the number of compartments into which the disc is divided, without relation to the size of the animal, the compartments being never less than seven, or more than eleven, and similar; all are composed of two rays formed by longitudinal fibres with a deep middle furrow. The pellucid, membranaceous process to which the central appendages and tentacula are attached, was connected with the under surface of the disc in three nearly equidistant places in the greater number of individuals, leaving three intermediate openings into the central cavity of the body; but in a few it was cruciform and connected in four places, making four entrances instead of three; in all other respects the several specimens agreed with each other.

Ophiura Texturata.

Lam. v. 2, p. 542. no. 1.—*Stella lacertosa*, Link tab. ii. f. 4.

Taken very abundantly in the trawl in Davis' Strait.

Ophiura Fragilis.

Lam. v. 2, p. 546. no. 12.—*Asterias fragilis*, Zool. Dan. v. 3, p. 28. tab. 98.

Taken in the trawl with the preceding species.

Asterias Papposa.

Faun. Græn. no. 364.

Several individuals with twelve rays, and one with eleven, were taken in the trawl on the west coast of Davis Strait, corresponding, in all respects, with the minute description referred to.

This species is justly remarked by Fabricius to appear radiate when viewed from above, and stellate, when turned on its back.

ASTERIAS RUBENS.

Faun. Græn. no. 362.

A single specimen was taken at the same time as the preceding species.

ASTERIAS VIOLACEA.

Zool. Dan. tab. 46.

Two specimens were taken in the trawl in from twelve to eighteen fathoms' water on the western coast of Davis' Strait, in lat. 70°; they were both six-rayed, a variety which does not appear to have fallen under the notice of Müller, who mentions from one to five rays only.

The specific name of *Violacea* seems particularly inappropriate to a species which varies so much in colour as the present; individuals being found occasionally red, blue, grey, and even black; those under description were rather red than violet.

ASTERIAS POLARIS.

A. pentagona, paginâ superiore tessellato-granulatâ, margine articulo spinoso.

Plate 1, fig. 2, 3.

A single specimen was taken by a drag-net on the coast of Melville Island; body plane, pentagonal, the sides lunate; margin obtuse, articulated, and furnished with a double row of small spines; the articulations in number 150 are continued on the inferior surface to the grooves of the feet, the grooves being broad, with fleshy pectinate feet; mouth central, simple; back tessellated with hexagonal superficial granulations, having in the centre a fleshy papilla, capable of being protruded more than three-tenths of an inch, but when retracted, appearing only as a central spot; when viewed by a microscope, the papilla is seen to be furnished with minute and delicate vesicles.

NAIS CILIATA.

N. proboscide cylindrico aculeis minutis reflexis hispido, margine antico ciliato.

Nereis ciliata, Müll. Zool. Dan., v. 3, p. 14, tab. 89, f. 1—4.

Several individuals, corresponding to the description and plate of Müller's Nereis Ciliata, were taken in a drag-net off one of the North Georgian islands: they were observed to have the power of exerting or of retracting the setæ of the tail at pleasure, which may explain the circumstance mentioned by Müller, of a specimen having been received from the Feroe Islands, in which the setæ appeared to be deficient.

ASCIDIA GLOBIFERA.

A. pedunculo longo, scabro; corpore subreniformi; aperturis distantibus quadrididis.

Lam. v. 3, p. 127.—Ascidia Clavata, Faun. Græn. No. 323.

Several individuals were taken by the trawl on the west coast of Davis' Strait, in lat. 70°. This species is described in the *Fauna Græn.* under the specific name of Clavata, which name has been applied, with more propriety, to the Ascidia figured by Pallas, *Spicil. Zool.*, 10, p. 25, t. 1., f. 16, which is distinguished by the two apertures being approximate, and terminal instead of lateral; the shape of the body of the present species is well characterized by Fabricius as "ovatum, subreniforme," (preferable to the corpore subgloboso of Lamarck;) and the apertures as "lateribus rugosis eminentibus, altera versus apicem sursum, altera versus basin deorsum tendente." The mouth of both apertures is in the figure of a cross, in which respect it differs from the A. Pedunculata, Brugiere *Dict.* No. 12, *Encycl. Méth.* pl. 6, f. 14, quoted by Lamarck as a synonym of the present species, but in which only the superior aperture is so distinguished, and the inferior is expressly described as simple: the peduncle is rough and hairy.

NYMPHUM GROSSIPES.

Pycnogonum Grossipes Faun. Græn. No. 310. Zool. Dan. v. 3. p. 67. t. 119?

Abundant at ebb tide on the shores of the North Georgian Islands, agreeing in all respects with the minute description of O. Fabricius, *l. c.*, except in the palpi, (described as antennæ), which in these specimens were of five instead of four articulations, the first being very short and tubular. Fabricius has also omitted to notice that the tarsi are jointed; the first joint is shorter than the second.

The account annexed to the figure of the *P. Grossipes* in the *Zool. Dan.*, refers to this description of Fabricius as being a most perfect one; but on comparing the figure with the description, and both with the specimens under notice, the following differences are observable; the middle and longest joint of the haunch appears short in the figure; the first joint of the tarsus is longer than the second; the fingers of the mandibles are not of equal length, and the palpi are proportionably shorter in comparison with the rostrum. It may be inferred from these differences that the *P. Grossipes* figured in the *Zool. Dan.*, is neither the *P. Grossipes* of Fabricius, nor the present species.

There are three essential points in which the species under description differs from the *N. Gracile* and *N. Femoratum* of Dr. Leach, *Zool. Misc.* vol. i. t. 19; in the fingers of the mandibles, which curve in a contrary direction to each other, and meet only at the point instead of along their whole inner edge; in the palpi being of five instead of six joints; and in the first joint of the tarsi being shorter than the second. These points are not indeed expressly mentioned in the *specific* description of the *N. gracile* and *femoratum*, but they are inferred, as forming a part of the prefixed character of Dr. Leach's *Genus* *Nymphum*; the thighs of the present species being compressed, (more in some individuals than in others), give it in other respects a near resemblance to the *Femoratum*.

NYMPHUM HIRSUTUS.

N. pedibus longissimis hirsutis, mandibularum digitis inequalibus per totam longitudinem conniventibus.

Nymphum Hirtum, Fabr. Syst. Ent. v. 4. p. 417?

A second species of *Nymphum* was found associated with the preceding, which it resembles in general conformation and size, but differs in the following particulars: the legs, mandibles, and palpi, are thickly set with hair; the curved fingers of the mandibles are not of equal length, and meet along their whole inner edge; the thighs are cylindrical, and not compressed in any individual; the first joint of the tarsus is extremely short; and the rostrum does not narrow towards its termination, as does that of the *N. Grossipes*.

PHOXICHILUS PROBOSCIDEUS.

Ph. proboscide corpore duplo longiore, mandibulis nullis, palpis inungulatis.

One perfect, and several imperfect, individuals of an undescribed species of the class *Pycnogonides*, were found at ebb tide on the shores of the North Georgian Islands. In the arrangement of Lamarck, this species is comprehended in the genus *Phoxichilus*, and establishes a sub-division of the genus which had been anticipated, characterized by "palpi without mandibles."

Body ovate, of four segments with lateral tubercles for the articulation of the legs, convex on the back, one segment only, the anterior, being marked by a transverse line: proboscis more than twice the length of the body, being one inch eight-tenths, and the body three-quarters of an inch long. This huge proboscis is nearly cylindrical, the extremity obtuse, with a triangular perforation, which influences in some measure the external shape. The diameter of the proboscis at the insertion and for a quarter of its length two-tenths of an inch, widening suddenly to thirty-five hundredths, and gradually to above four-tenths at the end. The anterior segment furnishes the palpi, and in the female the spurious legs; and has on the back a conical tubercle, on which two eyes only were distinguishable in the most perfect specimen, when it was

first brought on board the Hecla, at which time it had been dead for some days: the number of eyes are, however, most probably four, as is the case in its congeners. The palpi are longer than the proboscis, tubular, rather compressed and tapering, without claw or nail, of ten articulations, whereof the two first are nodular, the 3d half the length of the proboscis, 4th very short, 5th bending downwards, half the length of the 3d, and the remainder, short, bending upwards, the 7th being rather the longest. The spurious feet are also tubular, ten articulate exclusive of a tubercle, the three first short nodular, 4th and 6th longer than the body, 5th short, the others still shorter, bristled beneath, and terminated by a sharp nail. Legs eight, similar, cylindrical, nearly equal in length which is six inches; haunches three-jointed, equal, short, nodular; thighs rather shorter than the proboscis; tibiæ of two joints, equal, each two-thirds the length of the thigh. Tarsi also of two joints, the first being the longest, terminated by a strong and simple nail; posterior extremity of the body straight, tubular, with an opening at the end.

IDOTEA ENTOMON.

Entomon Pyramidale, Klein. Dub. 38. Fig. 1 & 2.—Oniscus Entomon, Pall, Spicil Zool. fasc. ix. p. 64. Tab. 5. f. 1—6.

A fine specimen above three inches in length was found at ebb tide on the beach of Melville Island, being the same animal which is represented by Klein, under the name of Entomon Pyramidale, and referred to by Linnæus in the 10th edition of the *Syst. Nat.*, as his Oniscus Entomon; as such it was again figured and described by Pallas, with whose minute description the present individual corresponded in all respects; the O. Entomon of British writers, especially of Pennant, *Brit. Zool.* v. iv. p. 38. pl. 19. f. 5. is a distinct species, never attaining the size of the present, and differing in the conformation of the anterior legs, and of the tail; the Idotea Entomon of Dr. Leach, *Lin. Tr.* vol. xi. p. 364. (caudâ apice tridentatâ) is the Oniscus Entomon of Pennant, but not of Linnæus, both of which are referred to as synonyms by Dr. Leach; the specific character of the Entomon of Linnæus (caudâ subulatâ) marking the distinction.

IDOTEA BAFFINI.

I. linearis, antennæ externæ corpore longioribus, dorso spinoso, caudæ segmento ultimo elongato, apice subulato.

Plate 1, fig. 4—6.

Brought up by the trawl in considerable numbers from twenty fathoms depth, coarse sandy bottom, on the west coast of Baffin's Bay, in latitude 71°. Exterior antennæ usually about one-sixth longer than the body, of four tubular, cylindrical articulations, exclusive of a peduncle; the second and third equal, and longer than the terminal, which is annulate. Inner antennæ not larger than the peduncles of the exterior pair, of three filiform articulations on a compressed fleshy peduncle, (fig. 6 magnified.) Eyes reniform; body linear, subcylindrical, of six segments exclusive of the head and tail, which last consists of two segments besides the terminal; the third segment of the body is equal in size to the two on either side. Legs fourteen, five jointed; first pair short, soft, compressed, ciliate beneath; second, third, and fourth pairs similar, laterally compressed, with long ciliæ on the anterior edge, directed forward and increasing successively in size; the second joint of these legs is much shorter than the others; fifth, sixth, and seventh pairs similar, decreasing in size, stout, tubular, and cylindrical, terminated by a strong curved nail. Abdomen with a four-valved receptacle. Branchiæ five pair, fleshy and ciliæ, the two first with long peduncles; covered by a strong and single plate, acuminate at the termination, and shut in by two longitudinal plates beneath; these are channelled down the middle, attached by the exterior side, and unfold from their junction in the middle. The back is armed with a double row of strong spines, two on each segment, which are strongest towards the tail; the back, tail, antennæ and legs hirsute; the females were observed to have their young attached to the exterior antennæ.

GAMMARUS NUGAX.

Cancer Nugax, Phipps' Voyage, t. 12., f. 3.

Abundant on the shores of the Polar Sea at ebb tide.

GAMMARUS AMPULLA.

Cancer Ampulla, Phipps, t. 12., f. 2.

Several specimens were taken by the trawl in the Polar Sea and in Davis Strait.

GAMMARUS BOREUS.

G. caudæ dorso spinoso, oculis lunatis, pedibus quatuor anticis chelatis, pari septimo præcedentibus longiore.

Squilla Pulex. Degeer Ins., v. 7, p. 525., t. 33., f. 1. and 2.

Abundant in pools of water left by the ebb tide on the shores of the Polar Sea. This species so much resembles in general appearance others which are found in similar situations, that a more detailed description than usual is required, for the purpose of discrimination. Individuals vary in size from half an inch to an inch and half. Body convex, laterally compressed, of seven smooth imbricate segments, prolonged in lateral lobes which increase successively in size to the fourth, the fifth, sixth and seventh being longer and narrower, detached from the segments, and attached to the thighs; tail of six segments, the three first produced in lobes larger than those of the body, and acuminate to a sharp point, directed backwards; the fourth, fifth, and sixth segments are less than the preceding, slightly tricarinate on the back, and spinous; the upper antennæ rather the longest, being equal in length to the head and four first segments; both pairs are composed of a three-jointed peduncle, terminated by a setaceous member, flexible by annular articulations; the third joint of the peduncle of the upper pair, and the first of the lower, short, the latter with a small spine at the base; the last joint of the upper antennæ is much longer than that of the lower, and has a small

seta at the base. Head rounded, obtuse, without a rostrum; eyes black, lunate, at the base of the upper antennæ; legs fourteen; the two first pair with a strong compressed hand, monodactyle; the hand of the second pair broadest; third and fourth pairs, alike and similar in size, directed forward, slim, and compressed, five-articulate (the second joint being very short), and ending in a curved nail; similar to these are the fifth, sixth, and seventh pairs, but directed backwards, the nails curving forward; these three last pairs are unequal in size, increasing successively from the fifth to the seventh, the sixth pair being considerably the smallest. The less are setose, especially at the joints. Swimmers three pair, being each a fleshy peduncle, with two plume-shaped branchial terminations; the fourth and fifth caudal segments are furnished with a pair of lateral bifurcate style processes, the outer style of the second pair being shorter than the inner; the sixth caudal segment terminates in a pair of small lanceolate plates, bristled at the apex, beneath which are inserted two peduncles, each bifurcating into oblong, stiff, and narrow plates, the outer of which are larger than the inner; colour usually pale, with a small red spot on each of the lateral lobes of the three first caudal segments. This description applies strictly to the many specimens which have passed under examination.

The *Squilla Pulex* figured by Degeer, *l. c.*, differing in no respect from the above description, is considered to have been an individual of the same species, and it is therefore believed to be common to the northern shores of Europe and America; the *Squilla Pulex* has been considered a synonym of the *Gammarus Pulex* of modern authors, but erroneously, as may be seen by comparing the figure in Degeer with that of the *Gammarellus Pulex*, Herbst., vol. ii., 130, tab. 36, fig. 4 and 5, which is the *Gammarus Pulex* of J. C. Fabricius, *Ent. Syst.*, and of Latreille, *Encycl. Méth.* pl. 328, fig. 11-15; the species are very distinct, differing in the lateral lobes, in the mucronate production of the caudal segments, in the absence of the carinæ and spines on the three posterior segments of the latter, and in the shape of the eyes: the *Gammarus Pulex* of Montagu, *Linn. Tr.* ix, t. 4, f. 2,

is a third species, differing not merely in appearance, but in its habits, being found only in fresh water. The *Oniscus Pulex* of Otho Fabricius, *Faun. Græn.*, No. 231, differs from the present species in the relative proportions of the three posterior pair of legs, the last pair being described by Fabricius as less than the two preceding, whereas in the *Boreus* the seventh are longer than the fifth and sixth pairs. The *Oniscus Cancellus* of Pallas, *Spicil. Zool.* ix, p. 53, tab. 3, f. 18, is distinguished by the lateral scales on the segments of the body, but in other respects is not very dissimilar to the animal under description: it may not be amiss to notice incidentally that an error has crept into the specific character of the *Cancellus* in the writings of modern authors, commencing it is believed with J. C. Fabricius, of describing it with sixteen legs, instead of fourteen, which is the usual number in the genus; in the original account of the *Cancellus*, *Spicil. Zool. l. c.* the number of legs is fourteen, both in the description and figure.

GAMMARUS LORICATUS.

G. Rostro corniformi deflexo, dorso carinato, segmentis posticè et acutè productis.

Plate 1, fig. 7.

This species was found associated with the preceding, and of the same size, but less abundant; body laterally compressed, especially the posterior segments; shell smooth, and much harder than in its congeners, resembling a coat of mail, whence the specific name; back carinate, the segments increasing in length from the first to the tenth, from whence they decrease; and beginning with the third or fourth, are produced in sharp and strong points directed backward: lateral lobes oblong, enlarging from the first to the fourth segment, and decreasing to the seventh; those of the three first caudal segments are larger than those of the body, and are acuminate; head produced into a strong, arched, carinate, and sharp-pointed rostrum, curving down between the antennæ; eyes large, black, lateral, prominent and reniform; beneath the eyes is a small lateral lobe; antennæ four-articulate, the

upper pair having a small seta at the base of the fourth articulation; legs fourteen, two first pair with a large compressed monodactyle hand, those of the anterior pair being smaller than the others; third and fourth pairs of the same length as the preceding, slender, terminating in a nail; the three posterior pair directed backward, similar in formation, but differing in size, the middle and longest pair being as long as the body, and the seventh pair shorter than the fifth, all terminating in a nail; colour in some individuals pale, in others varied red and white.

This species differs from the *Oniscus Serratus* of Fabricius, *Faun. Græn.* No. 237, in the length and relative proportion of the legs, the three posterior pairs of the *Serratus* being described as shorter than the third and fourth pairs, whereas those of the *Loricatus* are much longer, the sixth pair are indeed more than twice as long as either the third or fourth pairs: it also differs in many essential respects from the *Gammarus Carinatus*, Fabricius, *Ent. Syst.* 2, 515, (*Atylus Carinatus* Leach, *Zool. Misc.* ii, t. 69), as may be seen on comparing it with the figure of the *Carinatus* in the *Zool. Misc.*; (the latter is stated by Dr. Leach to have been taken from the identical specimens to which Fabricius attached the name of *Carinatus*;) the upper antennæ of the *Carinatus* are shorter than the lower, which, in the arrangement of Lamarck, is not merely a specific but a generic difference. The present species is sufficiently distinguished by the rostrum from the *Gammarellus Pulex*, Herbst. 230, t. 36, fig. 4 and 5.

GAMMARUS SABINI.

Leach in Ross's Voyage, Ed. 8vo., Vol. 2, page 178.

G. segmentis dorsilibus postice falcato productis, capite inter antennis acumine minuto.

Plate 1, fig. 8—11.

On the shores of Baffin's Bay, but not met with in the Polar sea: the head of this species which terminates in a point between the antennæ, instead

of being produced in a rostrum, readily distinguishes it from the preceding species, and has been added to the specific character assigned by Dr. Leach, in whose arrangement it was unnecessary, the formation of the head making part of the character of the genus.

TALITRUS EDWARDSII.

T. Rostro corniformi, antennis subæqualibus, corpore ovato depresso, caudâ compressâ tricarinatâ spinosâ.

Plate II, fig. 1—4.

Brought up in the trawl on the western coast of Davis' Strait; head produced in an acute depressed rostrum, slightly curving downwards. Body ovate, depressed, of seven imbricate segments, (the posterior being much larger than the others,) with small lateral lobes; tail laterally compressed, the three anterior segments with large lateral lobes; the caudal segments, and the sixth and seventh of the body tricarinate and spinous, each segment being posteriorly produced on each carina into a strong spine; those of the tail being also furnished with an intermediate smaller spine on the middle carinæ; fourth and fifth caudal segments small, each furnished with a double style process; the middle plate of the tail lanceolate, acute, bifid at the extremity, covering two style processes similar to the preceding; eyes large, prominent, black, situated at the base of the superior antennæ, having a small spine on the head between them; legs fourteen, the four anterior with a compressed monodactyle hand; the four next similar and equal, four-articulate, terminated by a curved nail and directed forward; the three posterior pair similar, directed backward, the first and second pair being equal, and less than the third pair; colour white, with deep red spots.

In conformity with the arrangement which is followed in the present account, this species has been considered a *Talitrus*, as the inferior antennæ are somewhat longer than the superior; this character is, however, by no

means remarkable either in this species, or in some others, which are distributed by it into the respective genera of *Talitrus* and *Gammarus*; if a subdivision be desirable in the well-defined and natural genus comprehending all these animals which so nearly resemble each other in general appearance and habits, the prolongation of the anterior part of the head into a rostrum, would seem preferable to a distinction founded on the relative length of the antennæ, which in many of the species are so nearly the same; or, the genus *Talitrus* might be limited to those species in which the superior antennæ are very short, not exceeding the length of the two first articulations of the inferior pair.

This species has been named in compliment to John Edwards, Esq., surgeon of the Hecla.

TALITRUS CYANÆ.

T. capite obtusissimo, antennis subæqualibus, corpore latiore, pedibus quatuor anticis inunguiculatis.

Plate 1, fig. 12—18.

Parasitic on the *Cyanea Arctica*, the individuals varying in length from two to eight-tenths of an inch: colour pale yellowish red, sprinkled with innumerable minute spots of deeper red; in about half the specimens, the number of which was considerable, the antennæ were equal in length to the five first segments of the body; in the others they were scarcely one-fifth as long, but otherwise similar; there was no other perceptible difference in the specimens. The two pair of antennæ are so very nearly of the same length, that it has been by no means easy to decide whether the species should be considered a *Gammarus* or a *Talitrus*; those of an individual, however, in which the greatest disproportion existed, have been figured (fig. 14, 15, and 16,) for the purpose of justifying the ultimate decision; the remarkable conformation of the head will doubtless be considered by many naturalists as a peculiarity requiring the establishment of a new genus.

Head rounded, and very obtuse; eyes extremely large, lunate, of a brownish

red colour; antennæ four-articulate, the second and third members very small, and the terminal setaceous, flexible by annular articulations; the last joint of the superior pair is thick and fleshy at the base; body of seven segments, broader and less compressed than is usual in its congeners; caudal segments four exclusive of the tail itself, more attenuated than those of the body, but larger; legs fourteen, the four anterior equal and similar, five-jointed, being a long compressed thigh with four much shorter articulations, hirsute, and unarmed; the ten posterior legs similar and equal in size, five-jointed, the thigh being long and much compressed, followed by three short fleshy joints, (the first of which is the shortest,) and by a long and curved member, terminated by a nail; the six posterior legs are directed backward; the three anterior caudal segments with each a pair of swimmers; the fourth caudal segment has on each side a pair of foliaceous styles borne on a two-jointed cylindrical foot-stalk; the tail consists of two foliaceous plates, each terminated by two smaller ones, strongly pointed and articulated to the larger; and is also furnished with a second pair of lateral style processes.

This description differs from that of the *Cancer Medusarum*, Otho Fabricius, *Faun. Græn.*, No. 232, in the number of joints of the legs, and in the four anterior being unarmed; the conformation of these legs distinguishes it also from the *Gammarus Medusarum* of J. C. Fabricius, of which a part of the specific character is "manibus quatuor monodactylis."

CRANGON BOREAS.

Cancer Boreas, Phipps, *Voy. App.* 190, t. 12, f. 1.

Several individuals were taken in the trawl on the west coast of Davis' Strait, and in a dredge at Melville Island; in the minute, and otherwise very exact account which has been given of this species in the Appendix to Captain Phipps's voyage, four strong spines were omitted to be noticed, situated beneath the thorax, one between each pair of legs, directed forward; the anterior is the strongest, and they decrease successively in

size; each segment of the body is also armed beneath with a spine of less strength than those which have been just described; the rostrum has a strong tooth beneath, which does not appear in the figure in Phipps's voyage.

CRANGON SEPTEMCARINATUS.

C. thorace septem-carinato; carinis serratis; pedibus secundi paris brevissimis inunguiculatis.

Plate II, fig. 11—13.

Several specimens of this undescribed species were taken in the trawl on the west coast of Davis' Strait. Length four inches; colour varied red and white above, white beneath. Thorax seven-carinate, the three lateral carinæ on each side serrate, the middle one with strong spines; rostrum short, curving down between the eyes, grooved in the centre; the five upper carinæ carried on in very faint rudiments along the back; the terminal setæ of the superior antennæ inserted nearly in the same horizontal line, the interior one being the longest; the first joint of the inferior antennæ scarcely produced beyond the middle of the squama; a strong spine on the abdomen directed forward between the chelate legs; the last joint of the pediform palpi sub-acuminate, rather longer than the preceding; second pair of legs slender, very short, bristled and unarmed, (*magnified in fig. 13,*) in which last essential point it differs from the *Pontophilus Spinosis* of Dr. Leach, *Mal. Pod. Brit.*, t. 37, to which in other respects this species bears a near resemblance.

It is proper to notice, that a rigid application of every part of the character of the genus *Crangon* of Lamarck would exclude the *Septemcarinatus*, by reason of the second pair of legs being unarmed, and would render necessary the establishment of a new genus, of which it would be the only known species, and might possibly be the only existing one; it may, however, be questioned whether the pursuit of natural history be either forwarded, or rendered more attractive by the multiplication of genera, which is a consequence of the extent and precision which have been introduced into the characters of some

of the modern genera ; as the object of the present account is limited to describing the new species in such manner, that systematic writers may be at no loss in disposing them according to their respective arrangements, the present species has been continued with the *Crangons*, *Vulgaris*, *Boreas*, and *Spinosis*, with which it accords so strikingly in general appearance, as well as in the leading and most essential characteristics ; with the reservation, however, of a notice, that it forms an exception to the "pedes decem unguiculati" of the other *Crangons*.

ALPHEUS ACULEATUS.

A. thoracis carinâ dentibus quatuor, margine antico trispinoso, segmentis utrinque aculeatis, palpis pediformibus apice spinulosis.

Cancer Aculeatus O. Fabr., Faun. Grœn., N^o. 217.

Astacus Grœnlandicus, J. C. Fabr. Ent. Syst., Vol. 2., P. 484?

Plate II, fig. 9, 10.

Several individuals were obtained at Melville Island, which being compared with the minute description of the *Cancer Aculeatus* of O. Fabricius, are believed to be the species described under that name : it is observable of this, as of other species of this genus, that the rostrum is found to vary so much in different specimens, in length and shape, as well as in the number of teeth above and below, as to make it no proper ground of specific distinction. It is probable that the *Astacus Grœnlandicus* of J. C. Fabricius should also be referred to this species ; as, excepting the rostrum, the descriptions are sufficiently conformable, and the "abdominis segmenta terminanter utrinque spinâ," of the *Grœnlandicus* is strictly descriptive of the peculiar characteristic of the *Aculeatus*. It is possible also that the *Astacus Histrio** of the same author, *Ent. Syst.*, p. 482, may have been a young individual of the present species, since it appears to differ in colour only.

* In the specific character of the *Astacus Histrio*, J. C. Fab. Ent. Syst. v. 2, p. 482, the margin of the thorax is said to be furnished with two teeth, whilst in the description which is added, the number of teeth are stated to be three; the former is presumed to be the error.

The middle lamella of the tail has seven spines on each side in the specimen which has been figured; but others had a greater or less proportion: the exterior antennæ are verrucose on the inner side.

ALPHEUS POLARIS.

Thoracis dimidio posteriore lævi, anteriore carinato serrato; chelis et unguibus apice nigris.

Plate II. fig. 5—8.

Fig. 8 is the rostrum of a second specimen.

Several individuals were brought up in the same drag-net, from fifty fathoms' depth, on the coast of Melville Island, all of which agreed in the peculiarities included in the specific character, but no two in the number of the teeth or in the shape of the rostrum, the former varying from three to six above, and from two to six below; length usually from one and a half to three quarters of an inch; colour pale, with red spots and markings; thorax armed on each side on the anterior margin with three spines, situated above and below the eye and at the junction of the lateral margin; these spines vary in strength in different individuals, the first especially being occasionally very strong; anterior half of the thorax carinate on the back, and serrate; posterior half smooth, without carina or teeth; the upper seta of the superior antennæ hollowed beneath, ciliate at the sides; both pairs spinous at the joints; pedipalpi, three-articulate, the last joint above three times the length of the second, much depressed, hirsute, and terminated by from four to six stiff black bristles; the fingers of the four anterior legs and the nails of the others black at the points; the nails are spinulose within; the first pair of swimmers smaller than the others, bifid and pointed; the hinder part of the third segment of the body is curved towards the tail, and the lateral lobes of the two next segments are produced in sharp points directed backwards; tail with two strong spines at the last joint; the middle lamella with ten spines above, five on each side; terminated by two strong black bristles.

POLYNOE CIRRATA.

Aphrodita cirrata, *Faun. Græn.*, No. 290.

Two specimens were taken on the shore of Melville Island in September.

POLYNOE SCABRA.

Aphrodita scabra, *Faun. Græn.*, No. 292.

A single specimen was taken on the shore of Melville Island in the same month as the preceding.

LOLIGO SEPIOLA.

An individual of this species was brought up in the trawl on the west coast of Davis' Strait, in lat. 70°. It agreed with the general description of authors, and with the figure in *Rondelet*, 519.

CLIO BOREALIS.

This well-known species was found in great abundance in all parts of Baffin's Bay, and Davis' Strait, in the neighbourhood of ice.

LIMACINA ARCTICA.

Abundant in the same localities as the preceding; both species were very rarely met with in the Polar Sea; and as they constitute the principal food of the black whale, their absence will explain why not more than two or three whales were seen during the whole period in which the Expedition remained in that sea.

SHELLS.

The following notice of the Shells collected by the Expedition, has been
furnished by JOHN EDWARD GRAY, Esq.

Sub Kingdom, MOLLUSCA.

Class.—GASTEROPODOPHORA.

Order.—CTENOBRANCHIA.

Fam.—MURICIDÆ.

Genus.—BUCCINUM. *Linné.*

* *Canal none, aperture base-cut.*

Species—*B. glaciale*, *Donovan Brit. Shells, t. 154.*

Tritonium glaciale, *O. Fabr., Faun. Grænl., 397.*

** *Canal short, open, bent to the left.*

Species—*B. Sabinii*.

Testa oblonga, ventricosa, alba; anfractibus quinque, convexis, longitudinaliter costatis; apertura ovata; canali brevi.

Buccinum Sabinii; *Gray Syst. Moll. Ineditum.*

Shell oblong, ventricose, white; whorls five, convex, slightly longitudinally rib-striated, finely transversely wrinkled; epidermis thin, pale; aperture ovate, half the length of the shell, ending in a short open canal; columella smooth, outer lip thin, inside slightly crenated; axis three-fourths of an inch, diameter three-eighths.

It differs from *Buccinum corneum*, (*Murex corneus*, *Lin.*) by not being so

long and slender, and the whorls more convex ; the aperture ovate instead of roundish-ovate. The specimen brought home appears to be young.

Class.—CONCHOPHORA.

Order.—PACHYPODA.

Fam.—MYADEÆ.

Genus.—MYA. *Lin.*

Species.—*Mya truncata*. *List. Conch.* t. 428, f. 269.

Order.—LEPTOPODA.

Fam.—NUCULIDÆ.

Genus.—NUCULA, *Lamarck*.

** *Shell behind slightly produced, gaping ; edge entire.*

Species.—*N. arctica*.

Testa ovali-elliptica, lævis, tenuis, fragilis, flavescens ; latere antico lato, rotundato, postico brevi, obliquè truncato.

Nucula arctica, *Gray ut supra*.

Shell oval-elliptical, smooth, very slightly concentrically wrinkled ; epidermis yellowish-green, glossy ; umbones rather acute, nearly central ; broad, rounded, rather narrowed, obliquely truncated behind ; inside glossy-white, edge plain in front ; length (from front to back) half an inch ; depth (from umbones to the opposite edge) a quarter ; breadth (from the outside of one valve to the outside of the other, in the most convex part) one-sixth.

*** *Shell behind much produced, gaping, above depressed.*

Species.—*N. rostrata*, *Lamarck Hist.*, vi., 58.

Arca minuta, *O. Fabr., Faun. Grænl.*, young ?

Arca rostrata, *Chem. Conch.*, vij. 106. t. 55. f. 550. 551.—not. Mont ?

Shell, length 7-8ths, depth 3-8ths, breadth 2-8ths, of an inch.

Animal, Mantle-lobes, separate from one another ; foot compressed, subquadrate, front rent ; gills attached to the hinder part of the mantle, as in the *Pholades* and *Myæ*.

Order.—PHYLLOPODA.

Fam.—HYATELLADÆ.

Genus.—*HYATELLA*. Daudin.

Species.—*H. Arctica*. Lamarck, Hist. vj.

Mya arctica. O. Fabricius, Faun. Grænl., 407.

Animal, Mantle-lobes, united together, except leaving a small ovate aperture for the passage of the foot, on the lower side, near the front. Tubes 2 distinct.

Genus.—*SAXICAVA*. Lamarck.

Species.—*S. pholadis*. Lam. Hist., v. 502.

Mya byssifera. O. Fab., Faun. Grænl., 408.

Mya pholadis. Linn.

Shell differs from *S. rugosa* by its larger size, and being more produced and acute in front, and in having deeper concentric furrows; length 1 inch and 3-4ths, depth 3-4ths, breadth 1-4th.

Animal, like that of *Hyatella arctica*.

Family.—*SOLENIDÆ*.

Genus.—*GLYCIMERIS*. Lamarck.

Species.—*G. siliqua*. Lam. Hist., v. 458

Solen siliqua. Chemn. Conch., xi. 192. t. 196. f. 1934.

Fam.—*VENERIDÆ*.

Genus.—*NICANIA*. Leach.

* *Margin of the valves even.*

1. *N. striata*. Leach. Ross's Voyage.

Shell, length 3-4ths of an inch, depth one-half, breadth 3-4ths.

(*Nicania Banksii* of Dr. Leach belongs to this section.)

** *Margin of the valves crenated.*

2. *N. crenata*.

Testa ovali-elliptica, virescens, concentrice sulcata; lunulâ oblongo-lanceolata impressa; margine crenulato.

Nicania crenata. Gray. ut supra.

Shell oval, elliptical, regularly concentrically urrowed; epidermis pale yellowish green; umbones nearly central, front, with an oblong lanceolate

depression; hinge of the right valve with one deep two-cut tooth and two lateral holes; of the left, with two single teeth, and a central hole, for the reception of the tooth of the other valve; lateral laminae, two in each valve, very small, only rudimentary; margin of the valves crenated.

In one specimen the teeth were reversed, for the right valve had two teeth, and the left but one uncut, but it differed in no other point as I could observe.

Animal, mantle lobes separate, foot compressed flat, quadrangular.

Tubes, none.

Genus.—*CRASSINA*. *Lamarck*.

Species 1.—*C. Semisulcata*. *Leach*. *Ross's Voyage*.

Species 2.—*C. Arctica*.

Testa subrotundæ-ovata, convexa, nigra, concentricè striolata; umbones subsulcatæ; lunula impressa oblongo-ovata; margine integerrimo.

Crassina Arctica. *Gray, ut supra*.

Shell roundish ovate, convex, white; epidermis black, shining, finely concentrically striated; umbones, rather prominent, very slightly concentrically furrowed; impression before the umbo, oblong ovate, deep, behind lanceolate; hinge, right valve, with one strong single tooth, with a hollow on each side; left, with two diverging teeth and a hollow in the centre; lateral lamina, two in each valve, front strong near to the hinge, hinder remote, small; edge even; length one and half, depth one and quarter, breadth 3-4th of an inch.

It differs from *crassina semisulcata*, by being rounder, more convex, and not so much sulcated.

Family.—*CARDIADÆ*.

Genus.—*CARDIUM*.

**** *Shell obsoletely radiately ribbed, edge even.*

Species.—*C. Radiatum.*

Cardium edentulum. Mont. Supple., 29.

Mactra radiata. Don., t. 161.

Family.—ARCADÆ.

Genus.—ARCA. Lam.

Species.—*A. glacialis*

Testa, ovali-elliptica, tenui, villosa, alba, concentricè et transversim striata; posticè rotundata; umbonibus approximatis; dentibus sub-obsoletis; margine integerrimo.

Arca glacialis. Gray, *ut supra.*

Shell, thin, oval, elliptical, rounded before and behind, regularly, finely concentrically, and transversely striated; epidermis, silky; umbones, towards the joint, incurved, nearly close; intermediate space, lanceolate, ventricose; margin, even, thin; hinge-teeth very small, indistinct in the middle, rather larger at each end; length 3-4ths of an inch, depth 3-8ths, breadth 4-5ths.

Animal, mantle lobes separate; foot flat, compressed, subquadrate, front two cut, with one or two fibres from the lower edge: trachea none.

Family.—MYTILIDÆ.

Genus.—MODIOLA. Lamarck.

** *Shell longitudinally obliquely striated.*

(*Modiola Arctica*, of Dr. Leach, in *Ross's Voyage*, is

Mytilus Fabr., *O. Fab.*, *Fauna Grænlandica*, 419.

———— *Chemnitz*, viij., 184. t. 85. f. 761.)

*** *Shell*, middle smooth, sinuated, before and behind, generally striated.

Species 1.—*Modiola nigra.*

Modiola discrepans. Leach. *Ross's Voyage*, not of Lamarck.

Mytilus discrepans. Mont. *Brit. Shells*, t. 26. f. 4.

Species 2.—*Modiola lævigata.*

Testa ovali-elliptica, convexa, virescens, anticè obsoletè costostriata, posticè rotundata lævigata.

Mytilus discors. Chemn., viij. 193. t. 86. f. 764. a. b.

Modiola lævigata. Gray, *ut supra*.

Shell, oval, elliptical, convex, ventricose, front with a few obsolete ribbed-striæ; middle and hinder part smooth, end rounded; epidermis, brownish or yellowish green; length one inch, depth 3-8ths, breadth one half of an inch.

Variety β .—*Substriata*, shell more oblong, hinder portion very closely obsoletely striated.

Two odd worn valves of this variety, which, on further examination, may probably be considered as a distinct species, were brought home by this expedition.

Order.—MICROPODA.

Family.—PECTENIDÆ.

Genus.—PECTEN. Lam.

Species.—*P. vitreus*.

Testa orbicularis, tenuis, hyalina, planulata lævissima, lucida, subequivalvis; auriculis subequalibus lævibus.

Pecten vitreus. Gray, *ut supra*.

Shell, orbicular, thin, hyaline, quite smooth, glossy; valves, right, flattish, ears, front slightly dilated, rounded, tender, obliquely truncated; left, rather convex; ears equal, obliquely truncated; margin even; length and depth one inch, breadth 1-4th.

Animal, mantle lobes, separate; edge, fringed; foot, ovate, thick. Tracheæ none.

Class.—SPIROBRACHIOPHORA.

Family.—TEREBRATULIDÆ.

Genus.—TEREBRATULA. Lam.

Species—*T. psittacea.* Lin. List. Conch., t. 211., f. 46.

Sub Kingdom.—ANNULOSA.

Class.—CIRRIPEDES.

Order.—ACAMPTOSOMATA.

Family.—BALANIDÆ.

Genus.—BALANUS. *Leach.*

Species.—*Balanus glacialis.*

Testa subcylindrica, obliqua, albida, obsolete transversim striata; operculo anticè profundè transversim sulcato, posticè irregulariter striato; apice acuto inflexo.

Shell, nearly cylindrical, oblique, aggregate; valves, slightly irregularly transversely striated; operculum, forepart deeply transversely furrowed; hind part irregularly striated; apex acute, bent forwards.

Class.—CHÆTIPODA.

Order.—SEDENTARIA.

Fam.—SERPULADÆ.

Genus.—SPIRORBIS. *Lamarck.*

Species 1.—*S. nautiloides.* *Lam. Hist.*, v. 359.

Serpula spirorbis. *Linné. O. Fab.* l. c. 377.

Species 2.—*S. spirillum.* *Lam.* l. c. 359.

Serpula spirillum. *Linné. O. Fab.* l. c. 376.

Sub Kingdom, RADIATA.

Class.—ECHINODERMATA.

Order.—SPHÆROIDA.

Fam.—ECHINIDÆ.

Genus.—ECHINUS. *Lam.*

Species.—*E. saxatilis.* *Linné. O. Fabricius*, l. c. 373?

Class.—ZOOPHYTÆ.

Order.—CELLEPORA.

Fam. 1.—FLUSTRADÆ.

Genus.—FLUSTRA. *Linn.*

Species.—*F. angustiloba.* *Lam. Hist.*, ij. 158.

ROCK SPECIMENS.

The following Observations on the Rock Specimens, collected by the Expedition, has been furnished by CHARLES KONIG, Esq., F.R.S., &c.

WE may conclude, from the nature of the rock specimens collected on the former voyage for discovering the North-West Passage, that both the east and west coast of Davis' Strait and Baffin's Bay are composed of primitive formations, in connexion with others of a more recent date, which for the greatest part belong to several members of Werner's trap formation. It would appear, however, from the paucity of specimens decidedly referable to trap rocks among those brought from Baffin's Bay by the late Expedition to the Arctic Seas, that the same formation is less prevalent on the western coast. While on the west coast of Greenland it exists in all its different gradations, but more particularly in the form of amygdaloidal transition trap, with many of those minerals which are usually found nidulating in it, such as calcedony, agate, jasper, green earth, &c., no traces of any of these substances are seen among the specimens collected by the Expedition in its progress down the western coast of Baffin's Bay, where the principal rocks are gneiss and micaceous quartz-rock, with some ambiguous granitic compound, in which hornblende seems to enter as a subordinate ingredient.

In the latitude of the entrance into Sir James Lancaster's Sound, the specimens, which I had an opportunity of seeing, begin to indicate the

predominance of older traps, with other concomitant transition rocks. Among them the more prominent are fragments (many indeed only detached from boulders,) of well-defined syenite, with red, and others with greenish-grey feldspar, the latter approaching to compact in its texture. Epidote, which is frequently seen in this syenite, has in some specimens the appearance of being one of the constituent ingredients of the rock. Other masses from Possession Bay are hornblende rock, with disseminated garnets; greenstone, apparently primitive, and a greenish-grey sandstone more or less impregnated with oxide of iron. There are a few other varieties of sandstone, one of which, more or less streaked with reddish-brown, has all the characters of and may possibly belong to the *bunt-sandstein* of Werner; especially as there are accompanying specimens of fibrous and fletz-gypsum, which formation is generally found with and resting upon the second or variegated sandstone, and is often overlaid by shell limestone. Of this last-mentioned variety of fletz limestone, there is a specimen among those collected in the valley of Possession Bay, by Mr. Fisher. This gentleman, it is observed, found that valley to consist partly of basalt; but I have not seen any specimens of this rock among the fragments obtained in that place. The other rocks from that quarter which have fallen under my observation, are chiefly primitive, viz., granite, gneiss, and some mica slate, with hornblende and quartz rock. They exhibit nothing new or remarkable in their oryctognostic character. The several varieties of granite differ from each other only in the varying proportion of the usual component parts, in their grain and colour. Both the gneiss and mica slate contain small imbedded garnets, and to the latter of these may be referred a micaceous mass, enclosing grains and amorphous masses of noble garnet, intermixed with a yellowish-white substance, which seems to be compact feldspar. Another substance from Possession Bay which deserves to be noticed, is a variety of fibrous limestone, not inferior in lustre, when polished, to the satin spar of Cumberland.

Compared with these rock specimens from the western coast of Baffin's

Bay, those gathered on the coasts where Captain Parry's discoveries commenced, seem to indicate a considerable difference in the respective geological features of those tracts. The north coast of Barrow's Strait, as far westward as the Polar Sea, and part of the eastern coast of Prince Regent's Inlet, appear to exhibit a character belonging to those more recent formations which are known to proceed from the primitive mountains of Scandinavia, and other explored tracts of high northern latitudes. Among them a variety of limestone seems to prevail, which is very like the Alpine or mountain limestone. It is compact, of yellowish and greyish colour, and contains, among other remains of zoophytes and shells, abundance of the same species of *Terebratula*, which are characteristic of that rock in various alpine tracts in Europe. A greyish-brown fetid variety of limestone, from the north side of Barrow's Strait, bears great resemblance to the mountain limestone as it occurs in Derbyshire; it contains parts of corallines, which are, however, too imperfect to be determined. The chert, or hornstone, of which likewise specimens were found in those parts, may, perhaps, occur as subordinate beds in this transition limestone. Among the specimens from Riley Cape is a fragment of white granular marble passing into compact.

Not less indicative of the formation to which the above-mentioned varieties of limestone belong, is a calcareous mass, which, it would seem, abounds in various parts of the north coast of Barrow's Strait, on the eastern coast of Prince Regent's Inlet, and which also occurs on the South coast of North Georgia. This limestone, which bears some resemblance to that of Gothland, in which parts of the stems of *Encrini* are found, is yet sufficiently distinct from this, and all other varieties I am acquainted with, to deserve being briefly noticed in this place.

It is of a yellowish white colour, and, in most hand specimens, exhibits a uniform coarse-granular structure; it is friable, and the grains are indeminately angular, more or less shining, and sometimes intermixed with, or cemented by, calcareous matter of a deeper yellow. Reduced to powder, it emits a yellow phosphorescent light when strewed on a heated iron. This

calcareous rock, in some specimens from Prince Regent's Inlet, abounds with parts of the jointed stem and single joints of a zoophyte belonging to the natural order of Encrini; other specimens appear to be entirely without these bodies: but on subjecting the different varieties of aggregation to a closer examination, it will be found that those which contain no remains manifestly belonging to the just mentioned organized fossil bodies, are, nevertheless, entirely composed of their *detritus*. This encrinitic mass, in single specimens, might readily be mistaken for a friable variety of common granular limestone, did not a comparison of a series of specimens prove that appearance to be produced by the extreme comminution of the substance of those fossil zoophytes, each particle of which still exhibits planes of cleavage parallel to the primitive rhombohedron.

The joints of the stem and branches of the zoophyte which appears to have thus largely contributed to the formation of this mass, are mostly cylindrical; their thickness is in an inverted ratio with that of the column of which they form parts; those near the body being the largest and thinnest. Cylindrical portions of the stem, formed by these thinner vertebræ, exhibit on their surface hemispheric concavities, some of them large enough to occupy from four to six of the thin joints or vertebræ, the lines of separation of which are seen to traverse the cavities in a horizontal direction. They are the sockets of articulation, in which the branches of the stem were inserted. The casts produced from these concavities in the surrounding mass, might, when seen without their moulds, be easily mistaken for distinct organic remains. There is little doubt that this zoophyte is related to some of those encrinites of which parts of the stem and branches so frequently occur in the transition limestone of Gothland. It seems to me also probable that many of the screw stones (*Epitonium*, L.) owe their origin to the decomposition of the stems of species belonging to this genus.

Another species of a genus of zoophytes, peculiar to the transition limestone, was found by Captain Parry, in Prince Regent's Inlet, at the foot of a high hill. It is a fine *Catenipora*, which appears to be quite dis-

inct from the common chain coral of Gothland, and other countries. Lamarek has two species of this genus, namely, the common one, which is (rather unaptly) called by him *C. escharoides*; and another, which he distinguishes by the name of *C. axillaris*, though it appears from his reference to a figure in the *Aménités Académiques*, that he is speaking of *Tubipora serpens*, L., which is not a congener of, and can indeed scarcely be considered as belonging to, the same natural order with *Catenipora*. We may, therefore, look upon this arctic species as an undescribed and anonymous one. I call it

CATENIPORA Parrii: tubulis crassiusculis, compressis, collectis in laminas sinuatas varie inter sese coalitas, tubulorum orificiis ovatis sæpe confluentibus: dissepimentis confertissimis.

The space between the laminæ is filled up by a yellowish calcareous mass; the tubes themselves are converted into carbonate of lime, internally drused with minute crystals of the same substance.

Very little can be inferred from the specimens of primitive rocks, gathered both in Prince Regent's Inlet and Barrow's Strait: they are, for the most part, fragments from rolled pieces, and consist chiefly of granite, mica slate, and quartz rock. There are, nevertheless, some among them, especially among those from the first-mentioned tract, which distinctly indicate primitive trap formation, such as granular and slaty hornblende rock, together with several varieties of syenite, and similar rocks, in which hornblende and feldspar form the predominating ingredients; some of them enclosing massive and indistinctly crystallized epidote of either a yellowish or grass-green colour. Among some specimens found at Port Bowen, on the eastern coast of Prince Regent's Inlet, may be specified a rolled piece of a mass, composed of flesh-red feldspar, greyish-white quartz, and a substance which is distinct from epidote, though it might easily be mistaken for it. According to an analysis, with which I have been favoured by J. G. Children, Esq., it is composed of silica 59.89, alumina 22.45, soda 6.84, lime 4.85, oxide of iron 4.0, magnesia 0.67, oxide of manganese 0.16;

—loss 1.14. Its specific gravity Mr. Children found to be 2.67. Before the blow-pipe it melts into a milk-white enamel. Its colour is a dirty yellowish green, passing into brownish. It is scratched by the knife; streak white. Fracture uneven, dull, approaching to resinous; here and there with small planes of cleavage, which are shining, and even splendent. It is rather easily frangible; the fragments are indeterminately angular, and translucent at the edges. This substance, which I suppose constitutes a distinct species among the silicates of sodium, appears to be one of those which enter the composition of the rock called Gabbro by Mr. Von Buch.

As probably connected with this formation we may consider the magnetic iron-stone, of which some specimens were gathered in lat. $72^{\circ} 45'$, long. 90° west; it is of a very fine grain, and occurs also disseminated in, and alternating with, granular quartz, exhibiting white and grey stripes. Some specimens also of jaspery ironstone, mixed with particles of quartz, were found on the eastern coast of Prince Regent's Inlet. Nor is the presence of iron less observable in specimens referable to more recent formations of trap from the same quarter, such as various kinds of clay ironstone, and ferruginous sandstone. Of the latter of these a greenish-grey variety appears to be of particularly frequent occurrence in those parts; if we are allowed to judge from the many, especially tabular, fragments brought from thence, which are all, more or less, impregnated with brown hydrous oxyde of iron, some being so completely penetrated by it that they may be considered as tolerably rich ores of this metal.

As it is sufficiently difficult to judge of the relative antiquity of depositions of sandstone, when observed *in situ*, it would, of course, be altogether unavailing to indulge in conjectures respecting the formations to which the fragments and rolled pieces may have belonged which were picked up in various parts of the north coast of Barrow's Strait, and Prince Regent's Inlet. The most abundant among them is a red sandstone, and a variegated one with brownish-red stripes. These varieties are seen to pass into one another: they are composed of small grains, united by a quartz cement,

and frequently confluent, so as to form a nearly compact, horn-stone-like mass, similar to the variety of hard sandstone from Egypt, which has been often employed in that country for purposes of statuary and architecture. In external characters it agrees exactly with one of the oldest formations of fletz sandstone, the *bunt-sandstein* of Werner; and the slaty grey sandstone, of which specimens were found, may possibly be the *sandstein-schiefer* of the same geologist, which is said to be a characteristic concomitant of this second sandstone.

There is nothing particularly remarkable in the specimens from Byam Martin's Island: they are few in number, consisting of two varieties of granite, both with bright-red feldspar, red close-grained sandstone passing into compact, and a ferruginous sandstone, together with small fragments of flint slate.

The rock specimens from Melville Island, though little can be said respecting the relative situation of most of them (they being chiefly rolled pieces, or casual fragments,) yet form a more complete series than the others, and some of them are by no means uninteresting. There are two or three varieties of granite, gneiss, and syenite; the latter (from Winter Harbour, and the north shore of the island,) of a larger grain and with red feldspar, contains much green epidote, and is very like that which occurs in several parts of the island of Jersey*. In another variety from Winter Harbour, which contains some disseminated iron pyrites, the hornblende appears in a more compact state, and in the shape of irregular veins and threads. Another variety from the same place is rather remarkable from its exhibiting here and there small cavities, drused by minute quartz crystals, and coated by scaly red ironstone. In another specimen, small grains of ironstone, attracted by the magnet, were seen, and, upon examination, found to be titaniferous. The few pieces of hornblende rock from this island, seem to be detached from boulders found in Winter Harbour; among them is also a specimen of a slaty compound of hornblende, mica, and red feldspar.

* See my description of it in PLEES's *Account of Jersey*, p. 233.

The principal formation of the island appears to be the fletz sandstone, with the subordinate one of coal and ironstone. The structure of the cliffs along a considerable extent of the northern shore of Barrow's Strait, exhibiting, beside horizontal stratification, numerous buttress-like projections and mural precipices, is not of uncommon occurrence in the formations of the transition and older fletz limestone; but still more striking in this respect is the appearance of the sandstone formations, especially those of more ancient date. Having undergone a peculiar disintegration which acts in a direction nearly perpendicular to the horizontal stratification, they exhibit the representations of ruined towers, buttresses, pillars, and similar works raised by the hand of men. This structure, so strikingly expressed in the sandstone formation of Bohemia, Saxony, and other parts of Germany, at the Cape of Good Hope, and particularly in several mountainous tracts of China, appears no less characteristic of the sandstone of some parts of the coast of Melville Island, especially at Cape Dundas, the westernmost point to which the investigation of Captain Parry extended, and the general features of which have been so ably described by him in his Journal.

This sandstone is composed of very fine, flat, confluent grains, with here and there the appearance of minute silvery scales, which, when more or less aggregate, communicate to the mass a perfectly micaceous appearance. It occurs both of a uniform greyish-white colour, and more or less marked throughout by small brown ochry spots, which sometimes are confluent into large patches. It generally separates into tabular pieces, and is sometimes invested on the rifts with thin plates of white carbonate of lime. Some of its varieties are not unlike grauwacke slate. It contains secondary fossils. Of the specimens which I had an opportunity of examining, two bore the impressions of a Trilobite, but too indistinct to admit of being determined with precision*.

* I have since determined it to belong to Brongnart's genus of *ASAPHUS* lately published; but whether or not it be one of the species described by him and Wahlenberg, cannot be ascertained from the specimen alluded to.

In another variety of sandstone, of a grey colour, found in the neighbourhood of Table-hill, I observed some disk-shaped bodies of about half an inch in diameter, exhibiting concentric circles, with crenulated rays proceeding from the centre, which is in the form of a small knob: they are, no doubt, trochi or joints of the stem of an *Encrinus*; but this is all that can be said of them.

The two specimens of sandstone containing the above-mentioned secondary fossils, are pretty similar in appearance to those others brought from Melville island, which abound with the vegetable remains characteristic of the coal sandstone. These are most of them merely impressions and filmy carbonaceous remnants of leaves (or fronds with ovate-lanceolate leaflets,) and stems, which by their regularly placed oval marks, indicate that the prototypes belonged to the arborescent ferns which we observe in such great abundance in the coal sandstone of more southern latitudes; a proof that the inhospitable hyperborean region where they occur, at one time displayed the noble scene of a luxuriant and stately vegetation. There is also among the specimens of sandstone from the same place, one bearing the impression of a thin, longitudinally-striated stem, not unlike that of some reed.

The coal itself is of a more or less slaty structure, and approaches, in some specimens, to the nature of brown coal; its colour is of a brownish black: it is easily cleft, and the planes of separation, which are without lustre, exhibit here and there black shining spots, and lines apparently of a bituminous nature. It emits no unpleasant smell when burning, and leaves copious greyish-white ashes. This coal is not the same with that of Disco Island, which contains the amber; it differs from it both in colour and structure. There is a piece of fine pitch coal or jet among the objects picked up in the neighbourhood of Cape Hearne.

Part of the specimens of argillaceous and brown ironstone, found in Melville Island, evidently belong to the same formation as the sandstone so abundant in these parts, and are alike concomitants of the coal. They consist chiefly of rounded pieces, and likewise of geodes: the former appear

also to exist here in the shape of a conglomerate. Some specimens from Table-hill and its neighbourhood, as also from Liddon's Gulf, are marked with the impressions of bivalves, particularly of a small, flat, ovate cuneiform species of *AVICULA*, of which a figure will be given elsewhere under the name of *A. Melvilliana*.

One of the fragments of compact brown ironstone exhibits a glossy surface and fracture, approaching to fibrous.

There are also specimens of sandstone which exhibit a transition into a kind of brown ironstone: in this state it is generally seen as tabular pieces, similar to that which in some parts of Norway, &c., is deposited in beds of a few inches' thickness in sandstone, into which it passes.

In the same manner the hydrous oxyde of iron is seen to penetrate clay which here and there slightly effervesces with acids, and is therefore a ferruginous marl.

There are a few varieties of slate-clay, such as might be expected to occur with coal and sand-stone formations: they are very soft, of ash-grey, and greenish-grey colour, and were found overlaid by sandstone at the bottom of ravines.

The limestone from Melville Island, especially that from Table-hill, bears the character belonging to that of the oldest fletz or transition formation. The secondary fossils which it contains are chiefly bivalve shells and coralines. None of these, however, are perfect enough to admit of the determination of the genera to which they respectively belong, except a small species of *Terebratula* of that division which comprehends the *Petunculi* of earlier writers on petrifications, and a species of *Favosites*, which does not appear to differ from *F. Gothlandicus*.

There are a few specimens among those from Winter Harbour and Table-hill, which appear to bespeak the presence of fletz trap-rocks in Melville Island; but being found as rolled stones, they do not allow any judgment being formed of the relation in which they stand to the other formations. I have seen from those parts a few small fragments of calcedony, with opaque

stripes like the onyx from Iceland and Ferroe ; fragments of red jasper, and of a jaspery breccia ; a piece of a compact hornstone-like mass of greenish colour mixed with reddish, and small rolled pieces of basalt. There is also among them a specimen of wood-hornstone of greyish-brown colour, with concentric yellowish-white rings. Nor should I omit mentioning a similar specimen of woodstone from Byam Martin's Island, with numerous close concentric rings, the curve of which indicates its being a fragment of the stem of a petrified dicotyledonous tree. It is susceptible of taking a beautiful polish.

APPENDIX XI.

BOTANY.

N^o. XI.

A LIST OF PLANTS,

COLLECTED IN

MELVILLE ISLAND,

BY THE OFFICERS OF THE EXPEDITION;

WITH CHARACTERS AND DESCRIPTIONS OF THE NEW SPECIES.

BY

ROBERT BROWN, F.R.S. AND L.S.

THE following list of the Plants observed in Melville Island, chiefly in the vicinity of Winter Harbour, is drawn up from the Herbaria of Captain Sabine, Mr. Edwards, Mr. James Ross, Captain Parry, Mr. Fisher, and Mr. Beverley, whose names are here given in the order of the extent of their collections.

To Captain Parry, Mr. Edwards, Mr. Fisher, and Mr. Ross, I am indebted for complete series of specimens of their respective collections; and I have to offer my acknowledgments to Captain Sabine for having allowed me freely to examine his more extensive herbarium, and to retain it until he was about to leave England, in October, 1821, when the whole, in compliance with his request, was returned to him.

The delay that has taken place in the publication of the present account has been, in part, owing to the state of my health during a considerable portion of the time that has elapsed since the collections were placed in my hands. I have also experienced much greater difficulty than I had anticipated in determining many of the species; arising either from their extremely variable nature, from the incomplete state of the specimens

contained in the collections, or from the want of authentic specimens of other countries, with which it was necessary to compare them. I may notice, likewise, as a third cause of the delay, the greater extent of my original plan, which included remarks on the state and relative proportions of the primary divisions and natural orders contained in the list; a comparison with the vegetation of regions of nearly similar climates; and observations on the range of those species common to Melville Island and other parts of the world. Towards the completion of this plan I had made considerable progress. But to have satisfactorily treated some of the subjects referred to would have required more time than I have had it in my power to devote to them, and in several cases better materials than I have hitherto been able to obtain.

I have consequently found it necessary to relinquish, for the present, this part of my plan*, and to confine myself to a systematic list, adding only characters and descriptions

* I shall here offer a single remark on the relative proportions of the two primary divisions of Phænogamous Plants.

In my earliest observations on this subject I had come to the conclusion that from 45° as far as 60° or perhaps 65° of North Latitude, the proportion of Dicotyledonous to Monocotyledonous plants gradually diminished. (*Flinders' voy.* 2. p. 538.) But from a subsequent examination of the list of Greenland plants, given by Professor Giesecke, (Art. Greenland, in Brewster's Edinburgh Encyclopedia) as well as from what I had been able to collect respecting the vegetation of alpine regions, I had supposed it not improbable that in still higher latitudes, and at corresponding heights above the level of the sea, the relative numbers of these two divisions were again inverted; (*Tuckey's Congo*, p. 423.) in the list of Greenland plants referred to, Dicotyledones being to Monocotyledones as four to one, or in nearly the equinoctial ratio; and in the vegetation of Spitzbergen, as well as it could be judged of from the materials hitherto collected, the proportion of Dicotyledones appearing to be still further increased.

This inversion in the cases now mentioned was found to depend at least as much on the reduction of the proportion of Gramineæ, as on the increase of certain Dicotyledonous families, especially Saxifragæ and Crucifæræ.

The Flora of Melville Island, however, which, as far as relates to the two primary divisions of Phænogamous plants, is probably as much to be depended on as any local catalogue hitherto published, leads to very different conclusions; Dicotyledones being in the present list to Monocotyledones as five to two, or in as low a ratio as has been any where yet observed; while the proportion of Grasses, instead of being reduced, is nearly double what has been found in any other part of the world; (see Humboldt, in Dict. des Sciences Nat., tom. 18, table at p. 416.) this family forming one-fifth of the whole Phænogamous vegetation.

of the new or imperfectly known genera and species; the only indication left of my intention to treat any of the subjects alluded to being a greater number of references to authors than is absolutely necessary for the present list, though essential to my original design.

With this more limited plan, and with its execution, as far at least as regards the determination of several of the species, I am so little satisfied, that had the publication depended entirely on myself, and related solely to the present essay, I should have deferred it still longer, probably until the return of Captain Parry from the arduous enterprise in which he is now embarked.

I have, however, to express my regret for the delay that has already taken place, as it has prevented the appearance of the valuable memoirs in other departments of Natural History, which have been long ready for publication; and also as it has till now deprived Botanists of the excellent figures so admirably illustrating the structure of the plants selected for engraving, and for which it is hardly necessary to add that I am indebted to the friendship of Mr. Bauer.





DICOTYLEDONES.

RANUNCULACEÆ.

1. *RANUNCULUS NIVALIS*, foliis radicalibus elongato-petiolatis dilatatis lobatis: lobis subovatis; caulinis subsessilibus palmatis, caule erecto subunifloro, petalis obovatis integerrimis longioribus calyce hirsutissimo, stylis rectiusculis ovaria glabra æquantibus.

Ranunculus nivalis, *Wahlenb. lapp. p. 156. Schlechtend. ranuncul. sect. post. p. 14.*

β. folia radicalia basi cuneata vix ad medium lobata, lobo medio semiovato basi latiore, petala orbiculato-obovata calyce hirsutissimo sesquilongiora.

Ranunculus nivalis. β. *Wahlenb. lapp. p. 157. (exclus. syn. Martens spitzb.)*

Ranunculus sulphureus. *Solund. in Phipps' voy. p. 202, (fide speciminis unici biflori absque foliis radicalibus, in Herb. Banks.) De Cand. syst. nat. p. 273, (exclus. syn. Martens spitzb., Laxmanni, Willdenovii et Smithii.) Br. spitzb. pl. in Scoresby's arct. reg. 1. append. p. 75. Richardson in Franklin's journ. p. 742.*

γ. folia radicalia basi subcuneata v. transversa alte lobata, lobo medio cuneato-obovato basi angustiore.

Obs. Varietas γ. cujus exemplaria duo tantum à nobis visa proxime accedit α. quæ, in Insula Melville haud observata, sequentibus notis distinguenda.

α. folia radicalia reniformia alte lobata, lobo medio cuneato-obovato basi angustiore.

Ranunculus nivalis. *De Cand. sys. nat. 1. p. 273, exclus. cit. ad Sw. in act. holm. 1789. p. 47. quæ R. pygmaeus, et syn. Martens spitzb. ad var β. pertinente.*

A. R. nivali differt R. frigidus *Willden.* foliis radicalibus minus alte incisus lobulis pluribus, petalis obcordatis venis anastomozantibus, quæ in R. nivali distinctæ, et statura paulo majore.

2. *RANUNCULUS SABINII*, foliis radicalibus elongato-petiolatis tripartitis: lobis ellipticis: lateralibus semibifidis; caulinis sessilibus tripartitis linearibus, calycibus hirsutis petala retusa subæquantibus.

Obs. Planta inter R. nivalem et pygmaeam media in Herb. D. Sabine exstat, ulterius examinanda, forsan haud distincta a R. nivali cujus cfr. ic. *Flor. Dan. 1699, ubi petala retusa et folium radicale pinnatifidum.*

3. *RANUNCULUS HYPERBOREUS*, foliis petiolatis trifidis: lobis divaricatis obtusis: lateralibus subbifidis medio integerrimo, caule repente, acheniis lævibus stigmatibus sessilibus apiculatis.

Ranunculus hyperboreus. *Rottb. in act. Hafn. 10. p. 458. t. 4. n. 16. Flor. Dan. 331. Zæg. flor. island. in Olafs. reise. 2. p. 237. Willden. sp. pl. 2. p. 1322. Pers. syn. 2. p. 104. Wahlenb. lapp. p. 158. De Cand. syst. nat. 1. p. 272. Schlechtend. ranuncul. sect. post. p. 12.*

Ranunculus foliis subrotundis trilobis integerrimis, caule repente. *Gmel. Sib. 4. p. 204. t. 83. b.*

DESC. *Herba* pusilla glabra. *Folia* elongato-petiolata, alte trifida, lobo medio ovali sæpissime indiviso, lateralibus sæpius bifidis lobulo exteriori minore, nunc indivisis, rarissime trifidis. *Petoli* filiformes basi vaginantes. *Pedunculi* oppositifolii, petiolum subæquantes, sæpius pilis sparsis adpressis. *Calyx* tetraphyllus nunc triphyllus, (an unquam 5-phyllus?) foliolis concavis pilosiusculis. *Petala* 5, calyce manifeste longiora, lamina obovata, intus nitenti trinervi, ungue lineari, apice foveola angusta marginata. *Stamina* 15—18, petalis breviora, filamentis inæqualibus, antheris ovalibus. *Achenia* (30 circiter) in capitulum ovatum congesta, stigmatè brevi mucronulata.

4. *RANUNCULUS AFFINIS*, foliis radicalibus pedato-multifidis petiolatis; caulinis subsessilibus digitatis; lobis omnium linearibus, caule erecto 1-2-floro cum calycibus ovariisque pubescentibus, fructibus oblongo-cylindraceis, acheniis rostro recurvo.

Obs. R. auricomo proxima species.

5. *CALTHA ARCTICA*, caule repente, foliis reniformibus crenato-repandis obtusis, folliculis (12—16) imbricatis, stigmatè persistente adnato apice recurvo, antheris linearibus viginti pluribus.

Obs. Affinitate C. radicans accedit; figura foliorum et caule repente convenit cum *C. natante*, quæ facile distinguenda pistillis stamina longitudine et numero superantibus, in capitulum sphaericum dense congestis, stigmatibus rectis simplicibus subsessilibus, antheris ovalibus, floribus albis foliisque aliquoties minoribus, et facie diversissima.

PAPAVERACEÆ.

6. *PAPAVER NUDICAULE*. *Linn. sp. pl. ed. 2. p. 725. Flor. Dan. 41. Willden. sp. pl. 2. p. 1145. Pers. syn. 2. p. 62. Br. in Ross' voy. ed. 2. vol. 2. p. 193. Hooker in Scoresby's Greenl. p. 413.*

Papaver nudicaule γ. *radicatum*. *De Cand. syst. nat. 2. p. 70.*

Papaver radicatum. *Rottb. in act. Hafn. 10. p. 455. t. 8. p. 24. Br. spitzb. pl. in Scoresby's arct. reg. 1. append. p. 75.*

CRUCIFERÆ.

7. *DRABA ALPINA*. *Linn. sp. pl. ed. 1. p. 642. ed. 2. p. 896. Willden. sp. pl. 3. p. 425. Pers. syn. 2. p. 190. Wahlenb. lapp. p. 173. De Cand. syst. nat. 2. p. 338.*

α. *siliculæ glabræ.*

Draba alpina *Herb. Linn.*

β. *siliculæ pilosæ.*

Draba alpina. *Br. spitzb. pl. in Scoresby's arct. reg. 1. append. p. 75.*

8. *DRABA PAUCIFLORA*, scapis aphyllis pedicellisque pilosis, foliis lanceolatis integerrimis pilis furcatis simplicibusque, petalis (flavis) spathulatis calycem hirsutum vix superantibus, ovariis glabris.

Obs. Dubia species, alpina proxima, ejus exemplar unicum in Herb. D. Sabine vidi.

9. *DRABA LAPPONICA*. *De Cand. syst. nat. 2. p. 344.*

Draba androsacea. Wahlenb. lapp. p. 174. t. 11. f. 5. exclus. syn.

Desc. *Radix* fusiformis, fibris nonnullis longis simplicibus, multiceps. *Caulis* brevis, divisi, basi reliquiis petiolorum emarcidis albis squamati, partiales semunciales, dense foliati. *Folia* lanceolata v. oblongo-lanceolata acutiuscula, plana, integerrima, venis alte immersis anastomozantibus, marginibus ciliatis pilis patentibus simplicibus paucissimisque furcatis, paginis adulatorum glabris, novellorum pube brevi ramosa substellata conspersis. *Scapi* unciales—sesquiunciales, sæpissime aphylli, nunc folio unico lanceolato-lineari instructi, glaberrimi, læves. *Corymbi* 5-6-flori pedicellis glaberrimis patentibus, inferioribus flore sæpe longioribus. *Calyx*: foliolis concavis, ovalibus, extus vel pilis nonnullis simplicibus conspersis vel sæpius glaberrimis. *Petala* alba, calyce duplo longiora, ungue brevi, lamina obovata venosa. *Stamina* tetradynama, calyce longiora, petalis breviora, filamentis edentulis, antheris uniformibus, subrotundis ochroleucis. *Orarium* sessile ovatum glabrum. *Stylus* brevissimus. *Stigma* capitato-bilobum, stylo manifeste latius. *Siliculae* racemoso-corymbosae, lanceolato-ovatae, glabrae, stigmate subsessili apiculatae, pedicellis patentibus paulo longiores polyspermae. *Semina* biseriata, immarginata.

10. *COCHLEARIA FENESTRATA*, siliculis ellipticis ovalibusve, valvis subaveniis, dissepimento elliptico-lanceolato axi sæpius fenestrato, foliis radicalibus cordatis integerrimis; caulinis spathulato oblongis subdentatis.

Cochlearia fenestrata. Br. in Ross' voy. ed. 2. vol. 2. p. 193. De Cand. syst. nat. 2. p. 367.

Desc. Species polymorpha. *Folia* radicalia reniformi-cordata, citò decidua; caulina sessilia, integra vel paucidentata. *Calyx* sæpe purpurascens. *Petala* alba, obovata, calyce longiora. *Antherae* subrotundae. *Stylus* brevis. *Stigma* capitatum. *Silicula* obtusa stylo brevi cum stigmate apiculata. *Valvae* ventricosae, venis altè immersis. *Dissepimentum* nunc ellipticum, nunc oblongum v. angustato-oblongum, e lamellis duabus tenuissimis facile separandis; loculi polyspermi. *Funiculi umbilicales* basibus connexis ope membranæ angustae dissepimento parallelæ. *Semina* contraria, h. e. cruribus embryonis invicem septoque parallelis, ovata, reticulata, immarginata.

Obs. In exemplari unico Siliculas passim triloculares trivalves dissepimento pariter fenestrato observavi.

PLATYPETALUM.

CHAR. GEN. *Silicula* ovalis polysperma, valvis convexis. *Cotyledones* incumbentes. *Stylus* brevissimus. *Calyx* subpatens. *Petalorum* laminæ dilatatae.

Habitus fere Brayæ quacum structura floris cotyledonibusque incumbendis convenit; satis diversum pericarpium forma. Affine quoque Subulariæ esse videtur, quæ ob cotyledones angustas bicrures, in embryone tantum bicruri ab eadem tribu minime removenda. Notis fructificationis pluribus accedit etiam Stenopetalo nob. quod calyce clauso, petalis subulatis! glandulis receptaculi et habitu diversissimum, nec revera affine.

11. PLATYPETALUM PURPURASCENS, stigmate bilobo patenti, stylo manifesto, scapis nudis unifoliisque pubescentibus, siliculis glabriusculis.

DESC. *Radix* perennis, fusiformis sæpe multicaulis. *Caules* breves, indivisi, basi denudati, supra dense foliati. *Folia* lanceolata, obtusiuscula, integerrima, rarius dente uno alterove instructa, crassa, avenia, læte-viridia, apice pilis nonnullis albis acutis simplicibus rariusve furcatis plerumque obsita; *petioli* basi dilatati membranacei pallidi. *Scapi* terminales, sæpius aphylli, vix unciales, basi nunc glabrati. *Corymbus* 4-6-florus, ebracteatus. *Calyx* modice patens, sepalis ovatis concavis subæqualibus, extus fusco-purpureis, limbo angusto albo, apice sæpe pilosiusculis quandoque glaberrimis, tardius deciduis. *Petala* alba, purpureo dilute tincta, unguiculata, laminis dilatatis, latioribus quam longioribus, integris, obtusissimis, ungues lineares superantibus. *Glandulæ* receptaculi quatuor, per paria approximata, latera filamentorum breviorum stipantes. *Stamina* tetradynama, *filamentis* edentulis distinctis; *antheris* unifornibus subrotundis ochroleucis. *Ovarium* sessile, ovale, pubescens pilis acutis simplicibus numerosis albis. *Stylus* brevissimus, tamen manifestus. *Stigma*: lobis patentibus, obtusis, papulosis. *Siliculæ* corymbosæ, ovales, stylo brevissimo cum stigmate patenti apiculatæ, biloculares, polyspermæ, valvis modice concavis, dissepimento completo. *Semina* immarginata, fusca.

12. PLATYPETALUM DUBIUM, stigmate indiviso subsessili, siliculis scapisque pubescentibus.

Obs. Floribus ignotis dubiæ generis planta cujus exemplaria tria in Herb. D. Sabine exstant. Cotyledones certè incumbentes et lineares, basibus tamen crus radiculare embryonis vix occupantibus.

EUTREMA.

Siliqua (abbreviata) anceps, valvis carinatis, dissepimento incompleto! *Cotyledones* incumbentes.

Herba habitu omnino Brayæ et Platypetali, quibus maxime affine genus, distinguendum tamen facile siliqua ancipiti, dissepimento incompleto, et seminum funiculis.

13. EUTREMA EDWARDSII—Tab. A.

DESC. *Herba* perennis, glabra, 2-3-uncialis. *Radix* fusiformis, crassa, biuncialis, striis transversis tenuibus sæpe subannulata, fibrillas numerosas exserens, multicaulis. *Caules* simplicissimi, erecti, paucifolii. *Folia* radicalia elongato-petiolata, ovato-lanceolata, integerrima rarissime paucidentata, crassiuscula, plana, uninervia, venis alte immersis crebre anastomo-

zantibus inconspicuis, glaberrima: *petiolis* folio 4-5-ies longioribus, linearibus membranaceis, albicantibus, adversus lucem trinerviis; *caulina* radicalibus conformia, inferiora brevi petiolata, superiora subsessilia. *Corymbi* 7-10-flori, densi, folio florali sessili saepe subtensi, cæterum ebracteati. *Calyx* glaber, sepalis æqualibus, ovatis, obtusis, modice concavis, trinerviis, extra medium purpurascentibus, insertione partum inæqualibus. *Petala* alba, calyce sesquilon-giora, *ungues* breves, *laminae* obovatæ, (vel ex ovali obovatæ) obtusæ, integerrimæ, planæ, obsoletè uninerviæ, vix manifeste venosæ. *Glandulae* receptaculi quatuor, per paria approximata, latera filamentorum breviorum stipantes, parvæ. *Stamina* tetradynama. *Filamenta* subulata, glabra, edentula, duo lateralia paulo breviora basi aversa (acie nec superficie plana ovarium spectanti.) *Antheræ* uniformes, ovato-subrotundæ, incumbentes, infra medium affixæ, loculis parallelo-contiguis, longitudinaliter dehiscentibus. *Pollen* flavum, sphaericum, simplex quantum observare potui per lentem centies augmentem. *Ovarium* sessile, glabrum oblongo-ovatum, uniloculare, placentis duabus parietalibus polyspermis. *Stylus* brevissimus vix manifestus. *Stigma* capitatum, indivisum v. semibilobum, stylo vix amplius. *Siliquæ* (siliculosæ) racemosæ, erectæ, lineari-lanceolatae, ancipites, glaberrimæ, vix trilineares, stigmate obtuso indiviso subsessili apiculatæ. *Valvæ* carinatae, carina manifesta, venis immersis, cortice demum ad margines solubili, in disco arctius adherenti; *replum* cortice pariter separabili. *Dissepimentum*, præter basin apicemque ubi sæpius completum, plerumque margo perangustus ad utrumque latus cujus processus membranaceus angustior e quo funiculi umbilicales brevissimi obtusi crassi papillæformes orti. *Semina* immarginata, fusca, lævia. *Cotyledones* incumbentes, lineari-oblongæ, plano-convexiusculæ, basi attenuata brevi in crure radiculari sita.

Obs. This species is named in honour of Mr. Edwards, Surgeon of the Hecla, from whose extensive and well-preserved herbarium I have derived great assistance in drawing up the present list, and in which only perfect specimens with ripe siliquæ of *Eutrema Edwardsii* were found.

EXPLICATIO TABULÆ—A.

EUTREMA EDWARDSII.—1. Planta florida, et 17. fructifera; utraque magnitudine naturali. Sequentes magnitudine auctæ; 2. flos integer; 3. petalum; 4. flos petalis orbatus; 5. sepalum (foliolum calycis); 6. stamina et pistillum integumentis floralibus avulsis; 7. stamen longius; 8. stamen brevius; 9. pollen ad augmentum 200; 10. pistillum receptaculo insidens à facie visum; 11. idem duplo auctius; 12. ejusdem portio transverse secta; 13. idem valvis avulsis; 14. pistillum à latere visum; 15. idem valvis avulsis; 16. placentæ parietalis portio cum ovulis; 18. siliqua matura dehiscens à facie visa; 19. siliqua matura clausa à latere visa; 20. eadem valvis orbata; 21. eadem duplo auctius; 22. semen; 23. idem transverse sectum; 24. idem longitudinaliter sectum; 25. embryo.

PARRYA.

CHAR. GEN. *Siliqua* lato-linearis, *valvis* venosis. *Semina* biseriata, *testæ* epidermide

laxo, corrugato. *Cotyledones* accumbentes. *Stigmata* approximata basibus connatis in stylum (brevissimum) decurrentibus. *Filamenta* edentula.

Herbæ perennes, glabræ, subacaules. Folia radicalia integerrima v. dentata, crassiuscula, opaca, venis immersis inconspicuis, petiolorum basibus dilatatis scariosis semivaginantibus. Scapi radicales, aphylli, ebracteati. Flores purpurei. Calyx subpatens. Glandulæ hypogynæ 4, filamenta longiora extus stipantes.

OBS. Affinitate proximum genus *Arabidi*, diversum siliquarum figura, structura seminum et stigmatis, et denique habitu.

This Genus is named in honour of CAPTAIN PARRY, the distinguished commander of the Expedition in which it was discovered, and whose herbarium contained very complete specimens of the species here described.

14. PARRYA ARCTICA—Tab. B.

Parrya, siliquis lineari-oblongis, antheris ovalibus, foliis (fere omnibus) integerrimis, pedunculis glaberrimis.

DESC. *Herba* humilis, perennis, glaberrima. *Radix* perpendicularis, crassa, sublignea, striis transversis tenuibus notata, sæpe multiceps. *Caules* brevissimi, dense foliati. *Folia* petiolata, lanceolata passimve spathulato-lanceolata, integerrima, nonnulla rarissime paucidentata, crassiuscula, opaca, immerse uninervia, venis altè immersis inconspicuis. *Petioli* dimidio superiore angusto lineari textura laminæ, inferiore dilatato semivaginantem scarioso albicanti. *Scapus* caulem abbreviatum terminans vel sæpe axillaris, aphyllus, ebracteatus, glaberrimus, florifer foliis sæpe duplo fructifer triplo—quadruplove longior. *Flores* corymbosi, pedunculis patentibus glaberrimis. *Calyx* glaber, modicè patens, deciduus: *sepala* ovalia, obtusa, concava, insertionem parum inæqualia, immerse nervosa, nervis passim oblique connexis. *Petala* quatuor, æqualia, unguiculata, purpurea, rarius alba, calyce duplo longiora; *ungues* lineares; *laminæ* obovatæ, uninerviæ, venosæ venis apice dichotomis. *Stamina* 6, tetradynamia. *Filamenta* edentula; 4 longiora latiora, altero latere extra medium paulo angustiora. *Antheræ* uniformes, infra medium affixæ, oblongo-ovales, ochroleucæ, basi cordata lobulis approximato-parallelis, connectivo perangusto. *Pollen* sphaericum, simplex (nec compositum quantum observare licuit per lentem 114-ies augmentem.) *Glandulæ hypogynæ* quatuor, filamenta longiora extus stipantes. *Ovarium* sessile, glabrum, biloculare, polyspermum, ovulis numerosis. *Stylus* brevissimus. *Stigma* bipartitum, lobis placentis oppositis, obtusis, mutuo sæpius appressis, basibus confluentibus et quasi in latera styli decurrentibus. *Siliquæ* racemosæ, erectæ, nonnullæ quandoque pendulæ, pedicellis patentibus, intra cicatrices floris sessiles, lineari-oblongæ, passim siliculiformes, utrinque obtusæ. *Valvæ* planæ, uninerviæ, venosæ. *Dissepimentum* completum (rarissime fenestratum foramine magno v. parvo) arachnoideo-areolatum, axi quandoque opaciori paulo incrassato, lineisve duabus opacioribus axi approximatis. *Funiculi umbilicales* marginati, latiusculi, dimidio inferiori septo cohærentes. *Semina* 6-8 in singulo loculo, sæpiusque biseriata, epidermis testæ laxus, tenuissimus, albus, ultra ipsam testam in limbum latiusculum extensus, supra nucleum rugosus, testa ipsa, dempto epidermide, crasso-membranacea è duabus lamellis

invicem arctè coherentibus conflata, membrana interna nulla nisi lamella interior testæ. Embryo curvatus, plumbeus. Cotyledones ovali-obovatae, planiusculæ, accumbentes, aveniæ. Radicula teres, acuta.

Obs. Parryæ altera species est *P. Macrocarpa*, siliquis lanceolato-linearibus utrinque acutis inter semina sæpe constrictis, antheris linearibus, pedicellis floriferis hispidiusculis, foliis incisim dentatisque; quæ Cardamine nudicaulis, *Linn. sp. pl. ed. 1, p. 654*, fide speciminis unici fructiferi absque floribus illius herbarii. Cardamine, &c. *Gmel. sib. 3. p. 273. n. 43*. Cardamine articulata, *Pursh. am. 2. p. 439*. *De Cand. syst. 2. p. 268*. Arabis nudicaulis, *De Cand. syst. 2. p. 240*.

EXPLICATIO TABULÆ—B.

PARRYA ARCTICA.—1, 2, et 3. Plantæ floridæ et 21 planta fructifera; omnes magnitudine naturali. Sequentes magnitudine auctæ, 4. flos integer, 5. petalum, 6. flos petalis orbatus, 7. sepalum, 8. genitalia integumentis floralibus avulsis, 9. stamen longius antice, 10. idem postice visum, 11. stamen brevius, 12. pollen 200-ies auctum, 13. pistillum receptaculo insidens à facie visum, 14. idem duplo auctius, 15. idem valvis avulsis, 16. ejusdem (14) sectio transversalis, 17. pistillum à latere visum, 18. idem valvis avulsis ovula exhibens loculi alterius, 19. ejusdem (17) sectio transversa, 20. placentæ portio cum ovulis et funiculis suis, 22. siliqua matura dehiscens à facie visa, 23. siliqua matura clausa à latere visa, 24. eadem valvis orbata exhibens dissepimentum et semina loculi alterius, 25. placentæ portio cum seminibus duobus epidermide laxo rugoso arilliformi tectis, 26. seminis maturi integumentis ambobus instructi sectio transversa, 27. semen epidermide arilliformi orbatum, 28. ejusdem sectio longitudinalis, 29. embryo situ naturali, 30. idem cotyledonibus arte expansis, 31. semen abortivum.

15. CARDAMINE BELLIDIFOLIA. *Linn. sp. pl. ed. 2. p. 913*. *Flor. Dan. t. 20*. *Wahlenb. lapp. p. 179*. *De Cand. syst. nat. 2. p. 249*. *Br. in Scoresby's arct. reg. 1. append. p. 75*.

Cardamine foliis simplicibus ovatis petiolis longissimis. *Linn. lapp. p. 214. n. 260*. (cum figura respectu habitus bona, quoad flores pessima, *tab. 9, f. 2.*) exclus. syn. Clusii et Gerardi, ad Arabidem bellidifoliam pertinentibus, monente D. Smith, in *Flor. lapp. ed. 2*.

CARYOPHYLLÆ.

16. LYCHNIS APETALA. *Linn. sp. pl. ed. 2. p. 626*. *Flor. Dan. 806*. *Willden, sp. pl. 2. p. 810*. *Pers. syn. 1. p. 520*. *Wahlenb. lapp. p. 135. t. 7*. *Br. in Ross' voy. ed. 2. vol. 2. p. 192*. *Richardson in Franklin's journ. p. 738*.

Cucubalus caule simplicissimo unifloro corolla inclusa. *Linn. lapp. 143. n. 181. t. 12. f. 1*.

17. CERASTIUM ALPINUM. *Linn. sp. pl. ed. 2. p. 628*. *Willden. sp. pl. 2. p. 814*.

Pers. syn. 1. p. 521. *Smith brit.* 2. p. 500. *Engl. bot.* 472. *Hooker scot.* p. 144 et 280 *Soland. in Phipps' voy.* p. 202. *Br. in Ross' voy. ed. 2. vol. 2. p. 192.* *Spitz. pl. in Scoresby's arct. reg.* 1. append. p. 75. *Hooker in Scoresby greenl.* p. 413. *Cerastium latifolium. Lightf. scot.* 1. p. 242. t. 10.

Obs. Species polymorpha cujus tres varietates sequentes in Insula Melville observatæ.

α. folia oblonga rariusve brevè ovalia, pedunculi dichotomi rarius uniflori, pili pedunculorum plerique glanduloso-capitati, capsulæ oblongæ calyce duplo fere longiores.

β. folia late ovata, pedunculi dichotomi pilis plerisque acutis, calycis foliola interiora glabriuscula.

γ. hirsuta, folia elliptica v. lanceolata, pedunculi divisi et solitarii, pilis plerisque acutis, capsulæ calyce paulo longiores.

18. *STELLARIA EDWARDSII*, foliis ovato-lanceolatis integerrimis enerviis nitidis, pedunculis terminalibus unifloris trifidisve, petalis bipartitis calyce immerse trinervi longioribus, antheris purpureis.

Obs. Duplex varietas.

In *α.* (cujus exemplaria plurima in Melville Island, et aliqua anno 1792, ad Chesterfield Inlet lecta vidi) folia ovata acuta v. ovato-lanceolata, pedunculi solitarii v. trifidi, lateralibus sæpissime unifloris altero nunc abortiente, dum solitarii ebracteati, dum divisi bibracteati, bracteis semifoliaceis margine membranaceo ciliato, pedicellis lateralibus pariter bibracteatis. Caulis et folia sæpius glaberrima, caulis nunc villosiusculus et folia basi ciliata villis tenuibus laxis.

β. (cujus exemplaria duo, quorum alterum multicaule,) folia ovato-lanceolata apice subattenuata nitidissima, pedunculi sæpius uniflori. Caules et folia glaberrima.

In utraque fructus desideratur, qui exstat in *S. Edwardsii, Richardson in Franklin's journ. p. 738.* In hac vero, quæ forsân distincta species, antheræ ochroleucæ minimæ et polline destitutæ, styli elongati et stigmata manifestiora, caules et folia glaberrima, capsula erecta calyce fere duplo longior semisexualis, semina reniformia lævia fusca.

De *Stellaria nitida Hooker in Scoresby greenl. p. 411.* cui secundum auctorem folia lanceolata siccitate subtrinervia, flores subpaniculati et antheræ flavæ, incertus sum.

19. *ARENARIA QUADRIVALVIS*, foliis subulatis acutis glaberrimis trinerviis, pedunculis unifloris elongatis pubescentibus, calycibus acutissimis trinerviis petala elliptica superantibus capsula quadrivalvi (nunc 3—5-valvi) sæpius brevioribus.

Alsine rubella, Wahlenb. lapp. 128, t. 6, forsân haud distincta; sed secundum auctorem capsula 3-valvis petala rubella et in icone subspathulata basi valde attenuata.

Desc. Herba 1-2-uncialis. *Radix* perennis, descendens. *Caulis* à basi ramosissimus cæspitem densum efformans, infra vaginis petiolaribus emarcidis nervisque foliorum denudatis obsitus, supra dense foliatus. *Folia* opposita basi connata, subulata, acuta, mutica, super concaviuscula, subter convexa, trinervia, marginibus nudis. *Pedunculi* terminales solitarii,

uniflori, prope basin hibractenti, *bracteis* lanceolatis, semifoliaceis margine membranaceo, pubescentes pilis brevibus, porrectis, glanduloso-capitatis, numerosis. *Calyx* 5-partitus, *sepalis* lanceolatis, acutissimis, vix acuminatis, concaviusculis, trinerviis, viridibus nunc fusco-purpureo tinctis margine albo membranaceo, extus pilis nonnullis brevissimis minute capitatis conspersis, persistens. *Petala* 5, integerrima, alba, calyce paulo breviora, ovali-oblonga v. elliptica, integerrima, basi parum attenuata, persistentia. *Stamina* decem, margini disci brevissimi subcarnosi, dubiæ originis, perigyni potius quam hypogyni, inserta. *Filamenta* subulato-filiformia, glabra. *Antheræ* ochroleucæ, subrotundæ, loculis approximatis, appositis, longitudinaliter dehiscentibus. *Ovarium* sessile, ovatum, glabrum, uniloculare, polyspermum. *Stigmata* quatuor (passim 3 et 5) filiformia, alba intus longitudinaliter hispidula. *Capsula* calyce persistenti appresso sæpius paulo longior, nunc eundem subæquans, quadrivalvis, passim 3 et 5-valvis, valvis vix omnino ad basin distinctis. *Receptaculum* seminum centrale, longitudine fere capsulæ, cum apice cavitatis primo connexum mox solutum. *Semina* reniformia, lævia, fusca, funiculis umbilicalibus cum receptaculo communi persistentibus.

20. *ARENARIA* ROSSII, glaberrima, foliis triquetris subulatis obtusiusculis muticis enerviis florem vix æquantibus, pedunculis unifloris elongatis, petalis oblongis calyces obsolete triner-vios paulo superantibus.

DESC. *Herba* pusilla, glaberrima. *Caules* ramosissimi, cæspitosi, dense foliati. *Folia* opposita basibus connatis, carinata. *Pedunculi* foliis aliquoties longiores. *Calyx* 5-partitus, purpurascens; *sepala* æqualia, ovata, acutiuscula, modice concava, obsolete trinervia, marginibus membranaceis nudis. *Petala* 5, angusto-oblonga, obtusa, integra, alba, calyce paululum longiora. *Stamina* 10. *Filamenta* disco scutelliformi subcarnoso potius perigyno quam hypogyno inserta, è latiore basi filiformia, glabra, alba. *Antheræ* ovales, ochroleucæ. *Ovarium* ovatum, sessile, uniloculare, glabrum, polyspermum. *Stigmata* 3, filiformia.

Obs. *Arenaria* Rossii, *Richardson in Franklin's journ.* p. 738, paulo diversa est statura majore, foliis calycem longitudine superantibus, minus crassis nec adeo obtusis, internodio sæpius brevioribus, calycis foliolis duobus exterioribus parum brevioribus, nervis lateralibus omnium manifestioribus, petalis longitudine calycis. In hac capsula trivalvis calycem æquat.

Alsine stricta *Wahlenb. lapp.* p. 127. ab *Arenaria* Rossii *Richards. l. c.* differt statura duplo majore, foliis longioribus acutis aliisque notis.

SAXIFRAGÆ.

SAXIFRAGA. *Linn.*

CHAR. GEN. *Stamina* 10, *antheris* didymis. *Petala* indivisa. *Styli* 2. *Capsula* (v. adherens v. libera,) bilocularis, birostris v. biloba, foramine inter rostra ipsiusve lobis intus longitudinaliter dehiscentis, polysperma. *Semina*: testa nucleo subconformi.

Obs. Characterem in paucis mutatum structuram antherarum et seminum respicientem

proposui ob genus maxime affine (*LEPTARRHENA nob.* quæ *Saxifraga amplexifolia*, *Sternb. saxifr. suppl. p. 2. t. 2.* *Saxifraga pyrolifolia*, *Don in Linn. soc. trans. 13. p. 389.*) cui antheræ uniloculares bivalves septo incompleto parallelo, et semina (capsulæ altè bilobæ) scobiformia, testa utrinque ultra nucleum ovalem elongata, subulata!

21. *SAXIFRAGA OPPOSITIFOLIA.* *Linn. sp. pl. ed. 2. p. 575. Willden. sp. pl. 2. p. 648. a. Smith Brit. 2. p. 450. Engl. bot. t. 19. Wahlenb. lapp. p. 113. Carpat. p. 118. Soland. in Phipps' voy. p. 202. Br. in Ross' voy. ed. 2. vol. 2. p. 192. Spitz. pl. in Scoresby's arct. reg. 1. append. p. 75. Don. in Linn. soc. trans. v. 13. p. 400.*

22. *SAXIFRAGA HIRCULUS.* *Linn. sp. pl. ed. 2. p. 576.*

β. Petala obovata, ungue nudo: caulis uniflorus.

Saxifraga propinqua. *Br. in Ross' voy. ed. 2. vol. 2. p. 192.*

Hirculus propinquus. *Haw. Saxif. enum. p. 41.*

Obs. Petala quandoque, sæpius forsan, appendiculata et calyces ciliati; ideoque à *S. Hirculo* vix differt nisi petalis plerumque obovatis ungue nudo nec ciliato, caule fere semper unifloro et statura minore. Hæc varietas solum in Insula Melville observata fuit.

23. *SAXIFRAGA FLAGELLARIS*, flagellis filiformibus, caule erecto simplici 1-3-floro calycibusque glanduloso-pubescentibus, foliis radicalibus caulinisque inferioribus obovato-spathulatis ciliatis; superioribus villosiusculis, petalis persistentibus capsula semisupera longioribus.

Saxifraga flagellaris. *Sternb. saxifr. p. 25 et 58. t. 6. Steven in Mem. soc. nat. cur. mosq. 4. p. 79. Marshall flor. taur-caucas. 3. p. 291. Br. in Ross' voy. ed. 2. vol. 2. p. 192. Don. in Linn. soc. trans. 13. p. 373.*

Saxifraga setigera. *Pursh. am. 1. p. 312.*

Desc. *Radix* perpendicularis, fibras longas subsimplices dimittens, elevans *Caulem* unicum, simplicissimum, 2-4-unciale, foliatum, pubescentem, pilis brevibus strictis purpureo-capitatis, sursum crebrioribus, basi demum glabratum. *Folia* indivisa, radicalia et caulina inferiora confertissima, patentia, superiora sparsa: *radicalia* cuneato-obovata et subspathulata, acutiuscula, plana, basi angustata in petiolum brevem latiusculum, immerse nervosa, nervis lateralibus dichotomis ramis interioribus in extimum margini folii approximatum desinentibus, apicibus mox infra apicem folii confluentibus, ibique callo subovali in pagina superiore parum elevato aucta, marginibus longitudinaliter ciliatis, pilis subulatis strictis rigidulis brevibus albicantibus, capitulo glanduloso purpurascente demum deciduo apiculatis, terminali dilatato pariter apiculato; *caulina inferiora* conferta, radicalibus subsimilia figura, ciliis marginalibus et paginis glabris; *superiora* sparsa, paulo minora, oblonga, acutiuscula, basi vix attenuata, subsessilia utraque pagina marginibusque pilis brevibus glanduloso-capitatis iisque calycis et caulis similibus. *Flagella* ex alis foliorum radicalium et inferiorum caulis solitaria, filiformia, 3-5-uncias longa, angulata v. anguste marginata, arcuato-deflexa, pilis glandulosis rarissimis conspersa, aphylla, apice sobo-

lifera: *gemma* parva, turbinata, è foliolis nanis numerosis conniventibus, arcte imbricatis, obovatis acutiusculis, immersè nervosis, glabris, marginibus ciliis nonnullis brevibus ornatis; et in ipsa basi radiculis 2—3 simplicibus singulis è vagina (coleorhiza) membranacea, primo clausa dein lacerata erumpentibus. *Flores* 1—3, pedunculati, erecti, mediis præcocior, ebracteatus, laterales bractea unica nunc duobus alternis lato-linearibus sessilibus foliaceis. *Calyx* basi adherens, dimidio libero 5-partito, laciniis ovatis, obtusiusculis extus pube glandulosa foliorum instar conspersis, intus glaberrimis, nervis alte immersis. *Petala* 5, aurea calyce duplo longiora, *ungue* brevissimo, *lamina* obovata, 5—7-nervi, sæpissime inappendiculata, quandoque squamula obsoleta extra nervos extimos. *Stamina* decem, calyce parum longiora, petalis breviora. *Filamenta* subulata, subæqualia. *Antheræ* uniformes, cordatæ, flavæ, loculis contiguis medio (margine) longitudinaliter dehiscentibus. *Pollen* flavum. *Ovarium* basi brevè turbinata adherenti, dimidio libero bifido; biloculare, polyspermum. *Styli* vix ulli. *Stigmata* suborbiculata, depressa, papulosa, nec omnino glabra. *Capsula* plusquam semisupera, bilocularis, biloba, calycis laciniis erectis cineta, et petalis persistentibus (vix emarcidis) longioribus occultata, lobis brevibus crassiusculis longitudinaliter, fere ad stigmata persistentia usque, dehiscentibus. *Semina* in cavitate biloculari indivisa solum, lobis vacuis, minuta, lævia, cylindræco-oblonga, castanea: *testa* membranacea. *Albumen* semini conforme, album, farinoso-carnosum. *Embryo* rectus, axilis, teres, longitudine fere dimidii albuminis. *Cotyledones* radícula breviores.

24. *SAXIFRAGA TRICUSPIDATA*. *Rotth. in act. Hafn.* 10. p. 446, t. 6. n. 21. *Gunn. norr.* 2. p. 135. n. 1046. *Flor. Dan.* 976. *Willden. sp. pl.* 2. p. 657. *Pers. syn.* 1. p. 490. *Sternb. saxifr.* p. 54. *Pursh. am.* 1. p. 312. *Giesecke Greenl. in Edin. Encyclop. Br. in Ross' voy. ed. 2. vol. 2. p. 192.* *Don in Linn. soc. trans.* 13. p. 440. *Richardson in Franklin's jour.* p. 737.

Obs. In planta Insulæ Melville, quæ statura humilior, folia radicalia passim et caulina omnia indivisa.

25. *SAXIFRAGA HYPERBOREA*, foliis glaberrimis: radicalibus palmatis elongato-petiolatis, caule lanato subbifloro, bracteis oblongo-linearibus sessilibus, petalis uninerviis, capsulis semiinferis.

Obs. Proxime accedit *S. rivulari* *Linn.* et ejusdem forsân varietas. *S. rivularis* autem differt bracteis ambabus sæpius, inferioribus semper subpetiolatis obovatis, caule inferne minus lanato. Ab utraque distincta est *S. petiolaris* (*Br. in Ross' voy. ed. 2. v. 2. p. 192.*) foliis omnibus glandulis subsessilibus conspersis: radicalibus scapum æquantibus v. superantibus, folio florali lobato, petalis trinerviis.

26. *SAXIFRAGA UNIFLORA*, foliis radicalibus aggregatis trifidis; caulinis linearibus indivisis distantibus, caule unifloro ovarioque infero viscido: pube glandulosa brevissima, calycibus obtusis, petalis obovato-oblongis.

Saxifraga cæspitosa, *Br. in Ross' voy. ed. 2. vol. 2. p. 192.*

Saxifraga venosa, *Haworth enum. saxifr. p. 28?*

Obs. Nimis affinis *S. caespitosa*, *Linn.*; vix distincta species.

27. *SAXIFRAGA NIVATIS*, *Linn. sp. pl. ed. 2. p. 573. Willden. sp. pl. 2. p. 645. Pers. syn. 1. p. 488. Smith brit. 2. p. 449. Engl. bot. 440. Wahlenb. lapp. p. 113.*

α. corymbus multiflorus thyrsoides, pedunculis inferioribus trifloris.

β. corymbus simplicissimus pauciflorus. *Linn. lapp. t. 2. f. 5.*

Obs. varietas *β.* dimidio minor, pube caulis et pedicellorum parciore brevior striata (nec, ut in *α.* laxa decumbente lanam brevem referente); in utraque petala persistentia. *Saxifraga longiscapa*, *Don. in Linn. soc. transact. 13. p. 388.* à varietate *β.* vix differt nisi scapo longiore.

28. *SAXIFRAGA FOLIOLOSA*, foliis radicalibus cuneatis subdentatis, scapis divisis; ramis apice unifloris infra tectis foliolis nanis fasciculatis, calycibus inferis obovatis, petalorum laminis cordato-lanceolatis.

Saxifraga stellaris var. *Linn. Saxifraga caule nudo simplici foliis dentatis coma foliolosa Linn. lapp. p. 137. γ. tab. 2. f. 3.*

Saxifraga stellaris β. comosa. Willden. sp. pl. 2. p. 644.

Obs. Distincta videtur à *S. stellari*, *Linn.* (que in Insula Melville haud observata fuit) scapo densè foliolato floribus paucissimis (v. nullis) calycibus obovatis, et præsertim petalorum æqualium laminis basi cordatis.

29. *SAXIFRAGA CERNUA*, *Linn. sp. pl. ed. 2. p. 577. flor. lapp. n. 172. t. 2. f. 4. Willden. sp. pl. 2. p. 652. Pers. syn. 1. p. 489. Smith brit. 2. p. 453. Engl. bot. t. 664. Flor. Dan. 22. Wahlenb. lapp. p. 116. Hooker. scot. p. 130. Gmel. sib. 4. p. 162. n. 74. Sternb. saxifr. p. 18. t. 12. f. 2. Soland. in Phipps' voy. p. 202. Br. in Ross' voy. ed. 2. vol. 2. p. 192. Spitz. pl. in Scoresby's arct. reg. 1. app. p. 75. Don in Linn. soc. trans. 13. p. 364. Richardson in Franklin's journ. p. 737.*

Obs. Variat rarius caule ramoso, ramis unifloris, que *S. cernua*, *Gunn. nor. n. 528. t. 8. f. 2.* et *Saxifraga bulbifera?* *Flor. Dan. 390. Zoega pl. island. in Olafs. reise 2. p. 236.*

30. *CHRYSOSPLENIUM ALTERNIFOLIUM*, *Linn. sp. pl. ed. 2. p. 569. Willden. sp. pl. 2. p. 637. Pers. syn. 1. p. 487. Smith brit. 2. p. 453. Engl. bot. 54. Hooker scot. p. 128. Wahlenb. lapp. p. 111. Carpat. p. 116. Marshall caucas. 1. p. 313. Richardson in Franklin's journ. p. 737.*

ROSACEÆ.

31. *DRYAS INTEGRIFOLIA*, foliis integerrimis passimque infra medium inciso-crenatis; venis subtus inconspicuis; novellis semisiccatisque marginibus revolutis.

Dryas integrifolia, *Vahl in act. soc. hist. nat. hafn. vol. 4. par. 2. p. 171. Flor. Dan.*

1216. *Pers. syn.* 2. p. 57. *Br. in Ross' voy. ed.* 2. vol. 2. p. 193. *Richardson in Franklin's journ.* p. 740.

Dryas tenella, *Banks' mss.* (fid. specim. à Terra Nova, ubi primum an. 1766, à D. Banks detecta) *Pursh. am.* 1. p. 350.

Obs. Nimis affinis *D. octopetalæ*, quæ differt statura sæpissime majore, foliis semper longitudinaliter inciso-crenatis, subtus costatis venis prominulis.

SIEVERSIA.

SIEVERSIA, *Willden. in Mag. der gesell. naturf. fr. zu Berlin* 5. jahrg. (1811.) p. 397. caractere emendato.

CHAR. GEN. *Calyx* decemfidus, laciniis alternis accessoriis. *Petala* 5. *Stamina* indefinite numerosa. *Ovaria* indefinita, ovulo adscendente. *Styli* terminales, continui. *Achenium* stylo toto persistenti aristatum. *Emryo* erectus.

Habitus fere, nec omnino, *Gei*, quod differt *Stylis geniculatis articulo superiore dissimili sæpiusque deciduo*.

Ab utroque genere distinguendum *Geum* potentilloides (*Coluria nob.*) ob *Stylum* basi cum apice ovarii articulatum deciduum, et *Achenia* (glandulosa) tubo elongato turbinato calycis inclusa.

Sieversia species sunt *Geum* montanum et reptans *Linn.* radiatum *Michaux*, *Peckii* et triflorum *Pursh*, glaciale *Adams*, humilis, congesta et dilatata *nob.* et *Geum anemonoides Willden. sp. pl.* quæ *Dryas* pentapetala *Linn.*, cui certè styli terminales nec laterales ut perhibet *Willdenow* in caractere generis *Sieversia*, pro hac specie solum ab illo instituti.

32. *SIEVERSII ROSSII*, aristis nudis, foliis radicalibus interruptè pinnatis glabris: pinnis trilobis; accessoriis imisque nanis indivisis, caule unifloro subdiphylo, petalorum venis omnibus distinctis.

DESC. *Herba* perennis, 2—6-uncialis, glabra. *Caudex* demersus, radiceformis, squamis scariosis fuscis (petiolorum reliquiis) tectus, infra medietatem fibras descendentes simplices fibrillosas crassiusculas proferens. *Folia radicalia* numerosa (4—7,) glabriuscula, petiolata, interruptè pinnata, exstipulata, pinnis circumscriptione ovatis cuneatisve, trifidis vel bifidis (lobo superiore lateralium deficiente) basi inæquali, inferne in rachin decurrenti, superioribus approximatis, nanis indivisis interpositis inter medias; imis ipsis minimis integerrimis. *Petioles* infra medium dilatati ibique scariosi, pallide fuscii. *Scapi* ex alis foliorum radicalium vel squamarum superiorum caudicis demersi, infra nudi, extra medium foliis sæpius duobus, alternis, sessilibus, pinnatifidis, exstipulatis, in statu florentiæ (cum scapi folia radicalia vix æquant) invicem apicique scapi approximatis, in fructiferis folia radicalia aliquoties superantibus, ab invicem et ab apice sæpe distantibus; teretes, pubescentes, pube descendendo sensim parciore. *Flos* solitarius, erectus, ebracteatus. *Calyx* extus pubescens, decemfidus, tubo brevi turbinato, laciniis 5 majoribus interioribus, late semiovatis, acutiusculis, quinque alternis dimidio minoribus, ovalibus, petalis oppositis. *Petala* 5, obovata, integerrima, venosa, aurea,

sinubus laciniarum majorum calycis inserta iisque sesquolongiora. *Stamina* fauci calycis inserta, indefinita. 30 plura. *Filamenta* subulata, glabra. *Antheræ* ovatae, flavæ, basi semibifidae, loculis parallelo-approximatis, longitudinaliter dehiscentibus. *Pollen* globosum, simplex. *Ovaria* indefinite numerosa, receptaculo subcylindraceo imbricato inserta, breve pedicellata, ab apice pedicellorum solubilia, hirsuta, pilis acutis strictis, monosperma, ovulo adscendente. *Stylæ* terminales, filiformes, subulati, glabri, stricti. *Stigmata* dilatata, obliqua, retusa, papulosa.

Obs. This species is named in honour of Lieutenant James Ross, in whose well-preserved herbarium several plants were found not contained in the other collections.

EXPLICATIO TAB. C.

SIEVERSIA ROSSII. 1, 2. Planta florida, magnitudine naturali. Sequentes auctæ. 3 et 4, flos antice et postice visus. 5. flos petalis et staminibus orbat. 6. petalum. 7. portio calycis cum staminibus respondentibus ejusdem basi insertis. 8, 9. stamen antice et postice visum. 10. pollen 200-ies auctum. 11. pistillum. 12. id. longitudinaliter sectum. 13. pistilla receptaculo insidentia. 14. receptaculum commune pistillorum cum pedicellis. 15. achenium fere maturum. 16. id. longitudinaliter sectum. 17. id. transverse sectum. 18. semen. 19. embryo.

33. **POTENTILLA PULCHELLA**, foliis pinnatis bijugis super villosis subter sericeis, foliolis pinnatifidis pari inferiori minore: lobis omnium lanceolato-linearibus, caulibus paucifloris (uniflorisque), stylo basi glanduloso-dilatata.

Potentilla pulchella, *Br. in Ross' voy. ed. 2. vol. 2. p. 193.*

Potentilla sericea? *Greville in Mem. Wern. soc. 3. p. 430.* fide speciminis in herb. groenlandico D. Jameson.

Obs. *P. sericea* *Linn.* facile distinguitur foliis 3—5-jugis, et lana elongata receptaculi, quod in *P. pulchella* pube brevi ovaria vix æquante instructum. Nostra planta affinitate propius accedit *P. niveæ*, haud obstante hujus divisione ternata foliorum, quæ nunc, rarissime quamvis, addito foliorum pari nano similiter pinnata evadunt.

34. **POTENTILLA NIVEA.** *Linn. sp. pl. ed. 2. p. 715.* *Rottb. in act. Hafn. 10. p. 451, t. 7. n. 22. optima fig. var. a.* *Willden. sp. pl. 2. p. 1109.* *Pers. syn. 2. p. 56.* *Wahlenb. lapp. p. 146.* *Nestler potent. p. 73.* *Lehman potent. p. 184.*

a. folia super villosiuscula viridia, subter niveo-tomentosa.

β. folia utrinque villosiuscula, paginis concoloribus.

Potentilla nivea β. *Wahlenb. lapp. p. 147.*

Potentilla Groenlandica, *Br. in Ross' voy. ed. 2. vol. 2. p. 193.*

Potentilla frigida? *Greville in Mem. Wern. soc. 3. p. 430.* see exempl. in herbario D. Jameson.

Potentilla verna, *Hooker in Scoresby's greenl. p. 413.*

Obs. Polymorpha species, cui nimis affinis est *Potentilla Vahlia* *Lehm. potent. p. 172*, quæ *P. hirsuta* *Flor. Dan. t. 1390*, secundum exemplar Groenlandium à D. Giesecke; et *P. Jamesoniana* *Greville in Mem. Wern. soc. 3. p. 417. t. 20.* fide exempl. à D. Jameson; nec diversa videtur *P. macrantha* *Ledeb. secundum specimen ex Oonalaska à D. Fischer.*

PAPILIONACEÆ.

35. *ASTRAGALUS ALPINUS*, *Linn. sp. pl. ed. 2. p. 1070. Flor. lapp. p. 218. n. 267. t. 9. f. 1. Flor. Dan. 51. Gmel. sib. 4. p. 45. n. 59. Pall. astrag. p. 41. t. 32. Willden. sp. pl. 3. p. 1297. Wahlenb. lapp. p. 190. t. 12. f. 5. (fruct.) Helv. 131. Carpat. 223. Pursh. am. 2. p. 472.*

Phaca astragalina, *De Cand. Astrag. p. 52. Pers. syn. 2. p. 331. Richardson in Franklin's journ. p. 745.*

36. *ONYTROPIS ARCTICA*, subacaulis sericea, stipulis petiolaribus, foliolis oppositis alternisque ovali-oblongis, capitulo subumbellato paucifloro, leguminibus erectis oblongis acuminatis calycibusque nigro-pubescentibus.

DESC. *Radix* lignea, perpendicularis, longissima, crassa, subramosa, multiceps. *Caulis* brevissimi, dense foliati et basi stipulis villosissimis persistentibus imbricatis tecti. *Folia* conferta, foliola 11—17, novella utrinque villosa sericea, adulta super glabriuscula, ovalia v. oblonga, sæpius obtusa raro acutiuscula. *Stipulae* membranaceæ, infra petiolo adnatæ, apicibus solutis semilanceolatis, acutissimis. *Scapi* foliis longiores, teretes, villosi, villis albo-cinereis, nunc cinereis nigrisque intermixtis, nunc omnino nigris. *Flores* majusculi. *Capitulum* 3—5-florum, pedicellis brevissimis. *Bractea* lineares, acutæ, patulæ, calyce breviores, extus pube nigricante. *Calyx* villis nigris subadpressis copiosis tectus, dentibus erectis brevibus. *Corolla* cæruleo-violacea, calyce duplo longior (9—10-lin. æquans.) *Vexillum* obcordatum lateribus reflexis, lamina basi attenuata absque callis auriculisve. *Alæ* vexillo breviores, obtusissimæ, apice dilatato oblique retuso, prope basin lateris auriculati intus plica saliente, hinc auriculo mediocri. *Carina* alis paulo brevior, obtusa cum mucrone brevi acutiusculo. *Stamina* inclusa 1—9-fid. antheris uniformibus. *Legumen* erectum, calyce hinc longitudinaliter fisso infra auctum, oblongum, acuminatum, sutura superiore intruso intusque septifero, septo incompleto bipartibili, funiculis adnatis parallelo-striato. *Semina* reniformia, in singulo loculo 7—9, funiculis apice solutis è margine dissepimento quasi ortis.

Obs. Species proxima *O. uralensi* quæ diversa floribus leguminibusque spicatis, foliolis numerosioribus et semper acutissimis, calycibus leguminibusque cinereis pilis nonnullis atris pluribus albis.

COMPOSITÆ.

37. *LEONTODON PALUSTRE*, *Smith brit. 2. p. 823. Engl. bot. 553. Pers. syn. 2. p. 367. Hooker scot. p. 227. Flor. Dan. 1708. Richardson in Franklin's journ. p. 746.*

Leontodon lividus, *Waldest. et Kitaib. pl. rar. hung.* 2. p. 120. t. 115. *Willden. sp. pl.* 3. p. 1545. *Marsch. taur-caucas.* 2. p. 246. vol. 3. p. 531.

Leontodon taraxacum? *Br. in Ross' voy. ed.* 2. vol. 2. p. 194.

Leontodon taraxacum β . *Wahlenb. carpat.* 238. *Upsal.* p. 257.

Obs. Nimis affinis *L. Taraxaco* *L.* videtur.

38. *ARNICA MONTANA* β . *Linn. sp. pl. ed.* 2. p. 1245. *Willden. sp. pl.* 3. p. 2106. *Pers. syn.* 2. p. 453. *Wahlenb. lapp.* 210.

Arnica angustifolia, *Vahl in Flor. Dan.* 1524. fide exempl. Groenland. à D. Giesecke.

Doronicum foliis lanceolatis, *Linn. lapp.* 241. n. 305.

Obs. Planta nostra Groenlandicâ sæpius humilior (2—4-uncialis) cum exemplaribus nonnullis à D. Richardson prope littora maris arctici quadrans vix specie distinguenda ab *Arnica montana* α . cujus insuper varietates sunt *Arnica plantaginea* et *fulgens*, *Pursh. am.*

39. *CINERARIA CONGESTA*, capitulo lanato, foliis lineari-lingulatis undulatis, caule simplicissimo.

Desc. *Herba* 3—4-uncialis lanata. *Radix* fasciculato-fibrosa. *Folia* radicalia et imacaulina numerosa indivisa, lingulata, obtusa, undulata, demum glabriuscula, viridia; caulina superiora 2—3, alterna, lana decumbente. *Caulis* erectus, simplicissimus, lana implexa tardius decidua tectus. *Anthodia* in capitulum terminale subsphaericum ebracteatum dense congesta, lana copiosa semi-involuta, radiata. *Involucrum* (calyx communis) simplici serie polyphyllum, lana decumbenti copiosa, è villis longis implexis articulatis, dense tectum. *Ligulae* numerosae, femineae, lamina oblongo-lineari, integra, 2—3-nervi. *Flosculi* hermaphroditi perfecti. *Tubus* gracilis. *Limbus* infundibuliformis semiquinquefidus, decemnervis, laciniis semilanceolatis trinerviis nervis axilibus tenuioribus. *Antherae* semi-exsertae basibus muticis, appendicibus apicis linearibus acutis. *Ovaria* glabra, subcylindracea. *Stigmata* intus canaliculata apice subtruncata. *Pappus* sessilis, filiformis, albus, radiis numerosis longitudinaliter denticulatis.

Obs. Distincta species videtur, attamen non longe distat à *C. palustri* statura et inflorescentia insigniter variabili.

40. *TUSSILAGO CORYMBOSA*, corymbo femineo laxo paucifloro: corollulis ligularibus nervosis; masculo congesto, foliis cordatis sinuatis inaequaliter dentatis subtus tomentosis.

Desc. *Radix* repens. *Folia* radicalia longius petiolata, cordata, nunc sagittato-cordata, sinuata, sæpius ad $\frac{1}{2}$ nunc ad $\frac{1}{3}$ fere radii, lobis inaequaliter dentatis, dentibus mucronulo eglanduloso terminatis, adulta super glabra cum tomento aliquo in nervis venisque primariis, subter lana brevi alba implexa, diametro sesquiunciali usque 2 $\frac{1}{2}$ uncias æquanti. *Scapi* 4—8-unciales, adulti tomento parco obsiti, bracteis (petiolis dilatatis) amplexicaulibus, sæpius foliolo nano dentato terminatis. *Anthodia* polygamo-dioica. *Mas. Corymbus* coarctatus pauciflorus: *anthodiis* radiatis: *ligulis* femineis, lamina oblonga: *flosculis* hermaphrodito-masculis, in-

fundibuliformibus, stigmatibus hispidis, incrassatis, exsertis. FEM. *Corymbus* simplex, 5—8. florus: *pedunculi* involuero longiores, bracteis nonnullis linearibus acuminatis pilis articulatis pubescentes. *Involucrum* (calyx communis) simplici serie polyphyllum, foliolis acutis, extus pubescentibus, pilis articulatis brevibus. *Corollulae* omnes ligulatae, femineae, praeter 2—3 centrales, hermaphrodito-masculas. *Femineae* involuero longiores, ligula 2—3-nervi indivisae, stigmatibus patulis, stylis extra tubum hispidulis.

Obs. Proxima species *T. frigida*, quae differt praesertim thyrso femineo multifloro congesto demum fastigiato, masculo laxiore, foliis minus altè sinuatis.

41. ANTENNARIA ALPINA, *Br. in Linn. soc. transact.* 12. p. 123.

Gnaphalium alpinum. *Linn. sp. pl. ed. 2.* p. 1199. *lapp. n.* 301. *Willden. sp. pl.* 3. p. 1883. *Pers. syn.* 2. p. 421. *Wahlenb. lapp.* 202. *Helv. p.* 149. *Carpat. in obs. ad.* p. 258. *Pursh. am.* 2. p. 525. *Richardson in Franklin's journ.* p. 747.

Obs. Planta feminea tantum in Melville Island lecta; mascula à nobis nondum visa (nisi hujus forsàn varietas pusilla ab Oonalaska,) et nullibi, quantum scio, observata!

CAMPANULACEÆ.

42. CAMPANULA UNIFLORA, *Linn. sp. pl. ed. 2.* p. 231. *flor. lapp. n.* 85. *t.* 9. *f.* 5. 6. *Rottb. in act. hafn.* 10. p. 432. *t.* 6. *n.* 19. *Willden. sp. pl.* 1. p. 890. *Pers. syn.* 1. p. 188. *Wahlenb. lapp.* p. 63. *Flor. Dan.* 1512. *Svensk bot.* 526. *Richardson in Franklin's journ.* p. 733.

ERICINÆ.

43. ANDROMEDA TETRAGONA, *Linn. sp. pl. ed. 2.* p. 563. *lapp. n.* 166. *t.* 1. *f.* 4. *Willden. sp. pl.* 2. p. 607. *Pers. syn.* 1. p. 480. *Flor. Dan.* 1030. *Pall. ross.* 2. p. 56, *t.* 73. *f.* 4. *Wahlenb. lapp.* p. 200. *Br. spitzb. pl. in Scoresby's arct. reg.* 1. *append.* p. 75. *Ross' voy. ed. 2. v. 2.* p. 192. *Richardson in Franklin's journ.* p. 737.

SCROPHULARINÆ.

44. PEDICULARIS ARCTICA, caule simplici lanato, foliis pinnatifidis lobis sub-ovatis dentato-incisis: adultis glabris; caulinis petiolo dilatato, calycibus quinquifidis lanatis, galea obtusa truncata bidentata, filamentis longioribus hirsutis.

DESC. *Radix* fasciculata, fibris crassis carnosis. *Caulis* simplex, foliatus, 2-3-uncialis, lana alba implexa tardius nec omnino decidua. *Folia* circumscriptione linearia, pinnatifida; lobis saepius approximatis, dentatis, primò lanata, adulta glabriuscula; *petioli* omnium, radicalium praecipue, lanati. *Spica* multiflora, densa, florida sesquiuncialis, fructifera 2-3-uncialis: *bractea* foliaceae, pinnatifidae. *Calyx* lanatus, lana, copiosa, alba, implexa, persis-

tenti, semiquinquefidus, lacinii inæqualibus, semilanceolatis, integerrimis, vel obsoletissime dentatis. *Corolla* purpurea, glaberrima: *galea* leviter falcata, obtusa, antice apice oblique truncata et ad truncaturæ basia utrinque dente unico acuto brevi quandoque brevissimo. *Stamina* inclusa: *Filamenta* duo longiora extra medium hirsuta, duo breviora longitudinaliter glabra: *Antheræ* uniformes, imberbes, basi bifidæ. *Stigma* subcapitatum, sæpius exsertum. *Capsula* calyce persistenti duplo longior, ovata, acuminata, inæquilatera, margine inferiore rectiusculo superiore modice arcuato, bilocularis, bivalvis, valvis medio septigeris, septi dimidio inferiori placentifero. *Semina* oblonga, teretiuscula, altero latere margine perangusto aucta, utraque extremitate areola nigricanti notata.

Obs. Species proxima *P. sudetica* Willden. 3. p. pl. 3. p. 209. quæ differt statura majore, caule glabro, foliorum lobis linearibus inciso-pinnatifidis; caulinis petiolo haud dilatato, corollæ labio inferiore manifestè dentato. *P. sudetica* Richardson in *Franklin's jour.* p. 742. à sudetica vera vix diversa est nisi corollæ labio superiore brevior, denticulo longiore, caule subunifolio nec species distincta videtur.

POLYGONEÆ.

45. *POLYGONUM VIVIPAREM*, Linn. *sp. pl. ed. 2. p. 516. fl. lapp. n. 152. Gmel. sib. 2. p. 44. n. 34. t. 7. f. 2. Willden. sp. pl. 2. p. 441. Pers. syn. 1. p. 439. Smith brit. 1. p. 428. Engl. bot. 669. Fl. Lond. new ser. 1. t. 81. Wahlenb. lapp. 99. Flor. Dan. 13. Scensk. bot. 336. Marsch. taur-caucas. 1. p. 301. Pursh. am. 1. p. 271. Giesecke Greenl. in Edin. encyclop. Hooker in Scoresby's greenl. p. 410. Richardson in Franklin's jour. p. 737.*

Natter Wurtz, Marten's Spitzb. lib. 3. cap. 7. t. I. a.

OXYRIA.

OXYRIA, Hill. *veg. syst.* 10. p. 24. (genus omnino artificiale, Hill l. c.) *De Cand. fl. franc. 3. p. 379.* (Rumicis subgenus). *Br. in Ross' voy. ed. 2. vol. 2. p. 192.* (genus distinctum). *Campdera rumex, p. 153. Hooker Scot. p. 99.*

CHAR. GEN. *Perianthium* tetraphyllum (duplici serie.) *Stamina* 6. *Styli* 2. *Stigmata* penicillata. *Achenium* lenticulare, membranaceum, utrinque alatum, perianthio infra cinctum. *Embryo* centralis.

Obs. Genus propius accedens Rheo quam Rumici, ab utroque satis distinctum.

A Rheo differt numero binario perianthii et stylorum, stigmatibus penicillatis, (quæ in Rheo capitata sublobata,) et textura achenii: convenit numero proportionali et situ staminum (quæ geminatim nempe foliolis exterioribus et solitarie interioribus perianthii opposita) pericarpio semidenudato alato, et embryo centrali.

Rumex ab Oxyria diversus est numero ternario omnium partium floris, situ staminum, quæ sex tantum et geminatim foliolis exterioribus perianthii opposita, fructu nucamentaceo aptero, foliolis interioribus mutatis perianthii tecto, embryo laterali: convenit fere stigmatum divisione.

Ovulj insertionem et Radiculæ embryonis situm inter notas genericas haud introduxi:

Semen enim erectum cum Embryone inverso uti character totius ordinis, (incluso certe Calligono contra assertionem Campderæ l. c.) eundem à Chenopodeis optime distinguens in *prodr. flor. nov. holl.* p. 419. primus proposui. Inter ordines apetalos similem structuram seminis in Urticeis et Piperaceis, aliis notis distinguendis, obtinet: dum Embryo inversus cum ovulo pendulo characterem essentialem CHLORANTHEARUM (*Br. in Bot. magaz.* 2190. nov. 1820.) efformat.

46. OXYRIA RENIFORMIS, *Hooker scot.* p. 111. *Scoresby's greenl.* p. 410. *Oxyria digyna*, *Campd. rumex*, p. 155.

Rheum digyuum, *Wahlenb. lapp.* 101. tab. 9. *fructus. Helv.* p. 74. *Carp.* 114.

Rumex digynus, *Linn. sp. pl. ed. 2.* p. 480. *fl. lapp. n.* 132. *obs. β.* *Willden. sp. pl. 2.* p. 258. *Pers. syn. 1.* p. 395. *Smith brit. 1.* p. 395. *Eng. bot.* 910. *Flor. Dan.* 14.

47. SALIX ARCTICA, ovariis subsessilibus tomentosis, stigmati quadrifido stylum subæquante, squamis orbiculato-obovatis, foliis integerrimis ovalibus obovatisve: adultis super glabris subter villosiusculis.

Salix arctica, *Br. in Ross' voy. ed. 2. v. 2.* p. 194. *Richardson in Franklin's journ.* p. 752.

Salix n. 37. *Hooker in Scoresby's greenl. p. 414.** secundum specim. à D. Scoresby.

Salix, *Greville in Mem. Wern. soc. 3.* p. 432. fide specim. in herb. grænl. D. Jameson.

DESC. *Frutex* depressus; *radice* lignea crassa longa. *Rami* decumbentes, floriferi omnes et sterilius nonnulli adscendentes, adulti glabri. *Folia* sparsa, petiolata, elliptico-obovata, v. obovata, integerrima, obtusa, quandoque retusa, novella super glabra, subter villis longis laxis decumbentibus, adulta utrinque glabra, venis subter paulo eminentibus venulis anastomozantibus. *Amenta* utriusque sexus ramos breves villosos foliatis terminantes. *Squamæ* orbiculato-obovate sæpe retusæ, fusco-nigricantes, villosæ. *Masc.* 8-10-lin. longa, densa. *Stamina* 2-3, forsân sæpius 3, filamentis distinctis. *Squamule* (Nect.) duæ, interiore paulo majore, utraque apice incrassato. *Fem. Squamula* unica, interior. *Orarium* brevissime pedicellatum, pedicello diametrum transversum capsulae vix æquante, dense tomentosum, cinereum. *Stylus* longitudine varians nunc stigmata æquans, nunc fere dimidio brevior.

MONOCOTYLEDONES.

JUNCEÆ.

48. JUNCUS BIGLUMIS. *Linn. sp. pl. ed. 2.* p. 467. *Montin in Amæn. acad. 2.* p. 266. *t. 3. f. 3.* *Flor. Dan.* 120. *Zag. pl. island. in Olafs. reise 2.* p. 235. *Vahl in act. soc. hist. nat. hafn. 2. par. 1.* p. 38. *Willden. sp. pl. 2.* p. 216. *Pers. syn. 1.* p. 385. *Smith brit. 1.* p. 382. *Engl. bot.* 898. *Bicheno in Linn. soc. transact. 12.* p. 320. *Hooker scot.* p. 106.

49. *LUZULA HYPERBOREA*, spicis multifloris subumbellatis pedunculatis sessilibusque (nunc omnibus sessilibus), bractea umbellæ foliacea; partialibus omnibus fimbriatis, capsulis obtusis perianthia acuta subæquantibus, caruncula basilari seminis obsoleta, foliis planis.

Luzula campestris, *Br. spitzb. pl. in Scoresby's arct. reg. 1. append. p. 75.*

Juncus arcuatus, *Hooker in Scoresby's greenl. p. 410. secund exempl. à D. Scoresby.*

Juncus campestris, *Soland. in Phipps' voy. p. 201. fide exempl. in Herb. Banks.*

Obs. Vix distincta species, et potius ad *L. campestris* mire variantem, quam ad *L. arcuatam* referenda; præsertim ob bracteam umbellæ sæpissime, non vero semper, foliaceam, et folia plana. *L. arcuatæ* β . (*Wahlenb. lapp. p. 88. cujus fig. in Flor. Dan. 1386.* sed exel. syn. Villars,) tamen accedit, inflorescentia, spicis multifloris, longius pedunculatis, quandoque etiam arcuato-recurvis, bractea umbellæ nunc, rarissime quamvis, squamacea, partialibus omnibus fimbriatis, et caruncula seminis obsoleta. Hæc autem forsân distincta à *L. arcuata* α . *Wahlenb. lapp. p. 87. t. 4. Hooker flor. lond. n. ser. t. 151.* cui spicæ longius pedunculatæ paucifloræ, et semina ni fallor absque caruncula.

In *Luzulis* omnibus, quas examini subjeci, excepta *L. pilosa*, observavi funiculum umbilicalem è filis spiralibus (decompositione partiali funiculi denudatis?) compositum.

CYPERACEÆ.

50. *CAREX MISANDRA*, spicis (4—6) pedunculatis ovalibus pendulis: terminali basi mascula; reliquis femineis, fructibus lanceolatis acuminatis bidentatis margine denticulatis squama ovali longioribus, stigmatibus 2-3.

DESC. (exemplarium quatuor incompletorum cum spicis fructiferis et portione culmi, in herbario *D. Ross.*) *Folium supremum* breve, lineare, marginibus longitudinaliter denticulatis. *Spicæ* v. umbellatæ, v. alternæ, fructiferæ ovales v. oblongæ pendulæ, pedunculis viridibus, laxis, angulatis, spica longioribus. *Bractea* umbellæ communis vaginans, basi atro-fusca, supra viridis in folium breve subulato-lineare, planum, marginibus denticulato-asperis producta, includens nonnullas parciales, quarum ima communi subsimilis, foliolo brevior terminata, nunc exserta. *Squamæ* ovales, obtusiusculæ, læves, glabræ, nigro-fuscæ apice limbo angusto albo. *Fructus* circumscriptione lanceolatus, acuminatus, basi attenuata, fusco-ater, ore ipso albicanti emarginato, marginibus acuminis et dimidii superioris denticulatis, cæterum lævis. *Achenium* intra cupulam brevè pedicellatum, obovatum, ventre plano, dorso dum stigmata duo modice convexo dum tria angulato.

Obs. Nimis affinis *C. fuliginosæ Sternb. et Hoppe in act. soc. bot. Ratisb. 1. p. 159. t. 3.* vix distincta species.

51. *CAREX CONCOLOR*, spicis sexu distinctis: mascula unica; femineis 2-3 erectis subsessilibus, squamis omnibus obtusis axi subconcolori, bracteis basi auriculatis, capsulis lævibus ovalibus mucronulo brevissimo integerrimo, stigmatibus 2, culmis lævibus.

Obs. *C. cæspitosa* proxima et vix differt nisi statura minori (3-4 unciali) squamis (nigro-spadiceis) axi sæpius marginibus semper concoloribus, foliis utrinque viridibus et culmis lævibus. An revera distincta species?

52. *ERIOPHORUM CAPITATUM*, *Host gram. austr.* 1. p. 30. t. 38. *Schrad. germ.* 1. p. 151. *Wahlenb. lapp.* p. 18. *Smith comp. ed.* 2. p. 11. *Engl. bot.* 2387. *Hooker scot.* p. 20.

53. *ERIOPHORUM ANGUSTIFOLIUM*, *Willden. sp. pl.* 1. p. 913. *Smith brit.* 1. p. 59. *Engl. bot.* 564. *Schrad. germ.* 1. p. 153. *Hooker scot.* p. 21.

Eriophorum polystachion, *Wahlenb. lapp.* p. 18.

Obs. Plantæ nostræ, quasi mediæ inter *E. angustifolium* et *polystachyon* forsan ab utroque distinctæ, duæ varietates adsunt.

α. pedunculis lævibus.

β. pedunculis scabris, denticulis crebris minutis.

Hæc ab *E. gracile*, *Roth catalect.* 2. add. et *Wahlenb. lapp.* p. 19. fid. exempl. ab ipsius auctoribus in *Herb. Banks.*, certe diversa, statura humiliori, foliis latioribus, squamis enerviis omnino nigricantibus acutioribus, et acheniis oblongo-obovatis.

GRAMINEÆ.

54. *ALOPECURUS ALPINUS*, spica ovata, arista perianthii glumam sericeam lateribus villosissimis subæquante, vagina suprema ventricosa folio suo plano lanceolato triplo longiore.

Alopecurus alpinus, *Smith brit.* 3. p. 1386. *Engl. bot.* 1126. *Hooker scot.* p. 22. *Roem. et Schul. syst.* 2. p. 272. *Br. in Ross' voy. ed.* 2. v. 2. p. 191. *Hooker in Scoresby's greenl.* 410. *Richardson in Franklin's journ.* p. 731.

Alopecurus ovatus, *Knapp gram. brit.* 15. *Hornem. in Flor. Dan.* 1565.

Alopecurus antarcticus, *Giesecke greenl. in Brewster's edin. encyclop.*

Obs. Species (quam primus in Scotiæ monte Loch ny Gaar anno 1794 legi) variat culmo, qui sæpius adscendens, erecto, spica oblongo-cylindracea, arista nunc gluma duplo longiore, rarius nulla.

A. antarcticus, *Vahl symb.* 2. p. 18. *Willden. sp. pl.* 1. p. 357. ab *A. alpino* differt spica sæpius cylindracea, arista glumam bis superante, folio supremo lineari apice attenuato vaginam suam superante v. æquante.

A. pratensis *L.* distinguitur spica cylindracea, glumis acutis latere tantum villosiusculis, arista glumis duplo longiore, vagina suprema laxiusculè cylindracea folium suum lineare multoties superante.

PHIPPSIA.

Phippsia (subgenus *Vilfa*) *Trinius in Spreng. neue entdeck.* 2. p. 37.

CHAR. GEN. *Gluma* uniflora, abbreviata, inæqualis. *Perianthium* muticum, obtusum, imberbe; *valvula superiore* nervis sursum divergentibus. *Lodicula* 2. *Stamina* 1-3. *Stigmata* 2, sessilia. *Caryopsis* libera, teres, exsulca.

Gramen pusillum, aquaticum v. in inundatis nascens. Culmi basi divisi. Folia plana; vagina integra, ipso apice tantum fisso. Panicula coarctata, ramis semiverticillatis. Glumæ enerves, inferiore minori. Stamina 1-3. *Stigmata persistentia.*

Obs. E graminibus unifloris proxime accedit *Vilfa* et *Colpodio*, affinitatem habet etiam quandam cum *Schmidtia Trattin*, (*Coleanthus Roem. et Sch. syst.* 2. p. 11.) cui certe gluma nulla, et perianthium bivalve, probante *valvula superiore* dinervi.

Inter genera locustis bifloris *Phippsia* affinis est *Catabrosea*, conveniens glumis abbreviatis, perianthiis obtusis concavis et foliorum vaginis apice tantum fisso: differt locustis unifloris, caryopside tereti, nec lateraliter compressa.

55. PHIPPSIA ALGIDA.

Agrostis algida, Soland. in Phipps' voy. p. 200. cum descriptione accurata. *Wahlenb. lapp. p. 25. t. 1.* ubi perianthium pro gluma, omnino prætervisa, depictum, et lodicula, perperam indivisa et aucta, pro perianthio univalvi. *Flor. Dan. 1505.* structuram eandem exhibens ac in *Wahlenb. l. c. Br. in Ross' voy. ed. 2. v. 2. p. 191.* (*Gramen sui generis.*)

Trichodium algidum, Svensk bot. 545. f. 2. ab ic. Wahlenb. mutuata. Roem. et Sch. syst. 2. p. 283.

DESC. *Gramen* biunciale, glaberrimum, cæspitosum. *Culmi* ipsa basi divisi ibique vaginis scariosis tecti. *Folia* linearia, obtusiuscula, lævia: *ligula* brevis, obtusissima, indivisa: *vagina* laxiuscula, integra, ipso apice tantum fisso. *Panicula* coarctata, ramis semiverticillatis, paucifloris, lævibus. *Locustæ* unifloræ. *Gluma* nana, bivalvis, inæqualis, *valvula* muticæ, obtusiusculæ, concavæ, haud carinatæ, integræ, membranacæ; *inferior* minor, enervis; *superior* plus duplo major, ipso perianthio triplo circiter brevior, obsolete uninervis; ambæ sæpissime post lapsum perianthii cum rachide persistentes, inferiore quandoque decidua. *Perianthium* intra glumam brevissime pedicellatum: *valvula inferior* concava, ovato-lanceolata, trinervis, nervorum dimidio inferiore hispidulo; *superior* ejusdem fere longitudinis et latitudinis sed diversæ figuræ, obtusa, 3-4-dentata, dinervis, nervis hispidulis à basi sursum paulo divergentibus, ipsa basi sub-approximatis. *Lodicula* 2, subovatæ, membranacæ, indivisæ, glabræ. *Stamina* 1-3. *Stigmata* 2, sessilia, longa, hyalina, ramulis simplicibus. *Caryopsis* ovali-oblonga, teres, exsulca, stigmatibus emarcidis diu coronata. *Embryo* caryopside quadruplo brevior.

Obs. Hæc è speciminibus à Melville Island; species autem variat perianthii nervis lævibus, staminibus 2, et quandoque unico, nervo alteri valvulæ superioris perianthii opposito.

In Terra Tschutski à Dav. Nelson, in tertio it. Cook lecta fuit varietas (?) insignis, duplo major, culmis ramosis foliis laxioribus aliisque notis diversa: vix species distincta.

COLPODIUM.

Colpodium. Trin. agrost. p. 119. f. 7. Subgenus Vilfæ Trin. in Spreng. neue entdeck. 2. p. 37.

CHAR. GEN. Gluma uniflora, subæquivalvis, mutica. *Perianthium* gluma longius, submuticum, obtusum, apice scarioso; *valvulis* subæqualibus, integerrimis, superiore exserta, dinervi, lateribus parallelis. *Lodicula* 2. *Styli* 2. *Stigmata* plumosa. *Caryopsis*. - - -

Gramen glabrum. Culmi erecti v. adscendentes. Folia plana, ligula indivisa imberbi folio latiore, vagina longitudinaliter fissa. Panicula coarctata, ramis semiverticillatis. Locustæ oblongæ, glabriusculæ cum v. absque rudimento, sæpius setuliformi, flosculi secundi.

Obs. Gramen hocce habitu fere peculiari, primo intuitu Poæ propius accedit quam Agrostidi s. Vilfæ, relationem quodammodo etiam cum Dupontia et Deschampsia habere videtur. Caryopside ignota autem genus haud stabilitum, et de ejusdem affinitate cum Colpodii speciebus Trinii, præsertim *C. Steveni* et *compresso*, incertus sum.

56. COLPODIUM LATIFOLIUM, panicula coarctata lanceolata, foliis planis lato-linearibus.

Agrostis paradoxa, Br. in Ross' voy. ed. 2. v. 2. p. 192.

DESC. Gramen robustum, spithameum—pedale, glabrum. *Culmus* è basi decumbenti v. radicans adscendens, nunc erectus, teres, lævis, foliatus, basi vaginis scariosis tectus. *Folia* plana, lineari-lanceata, acuta, stricta, utrinque marginibusque retrorsum scabris: *vaginæ* scabriusculæ, ad basin usque fissæ, suprema folio proprio longior: *ligula* obtusa, imberbis, erosa, denticulata, folio latior. *Panicula* coarctata, angusto-lanceolata, fusco-purpurea, perianthiorum apicibus albis, sesquiuncialis—biuncialis, ramis brevibus, semiverticillatis, appressis, inferioribus demum modice patentibus, pedunculis pedicellisque pauci-denticulatis, strictis, apice vix dilatato cum locusta continuo. *Gluma* uniflora, bivalvis, mutica, herbaceo-membranacea, glabra, valvulis suboppositis, concavis vix carinatis, obtusiusculis v. acutis, integris semitrinerviis, inferiore paulo brevior, nervis lateralibus brevissimis, superiore acutior, nervis lateralibus magis manifestis sed longe infra apicem evanescentibus. *Perianthium* intra glumam, qua haud duplo longius, brevissime pedicellatum, cum pedicello crasso articulatam, basi obliqua, herbaceo-membranaceum, textura fere glumæ, muticum, per lentem pube brevissima conspersum, intra glumam è majore parte viride, supra eandem fusco-purpureum, apice scarioso albicanti. *Valvula* concavæ, textura omnino similes, longitudine subæquales, inferior nervo centrali manifesto sæpius apicem muticum attingenti, nunc in setulam dorsalem brevis-

simam altitudinem valvulæ subæquantem desinente, lateralibus utrinque duobus obsoletis, infra apicem prorsus evanescentibus; *superior* obtusior, integerrima, dorso angusto planiusculo vel leviter convexo, lineari, dinervi, nervis parallelis, tenuibus, nudis, lateribus dorso aliquoties latoribus, parallelis, marginibus nudis. *Lodiculæ* duæ, subcollaterales, membranaceæ, semibifidæ, dentibus acutis, imberbes, longitudine ovarii. *Stamina* 3, filamentis capillaribus, antheris fusco-stramineis, utrinque bifidis. *Ovarium* ovatum, acutum, glabrum, exsulcum. *Styli* brevissimi, approximati, vix manifesti. *Stigmata* hyalina, densæ plumosa, apicibus acutis.

Obs. In exemplaribus plerisque nullum certe rudimentum flosculi secundi, quod tamen in nonnullis à Melville Island atque in exemplari à Possession Bay adest, setuliforme, hispidulum; et in specimine unico à Melville Island locustas nonnullas bifloras flosculo secundo pedicellato perfecto observavi.

57. *POA ANGUSTATA*, panicula simplici coarctata lineari-lanceolata, locustis 4-5-floris, gluma inferiore dimidio minore, perianthiis apice erosis: valvula inferiore basi elanata lateribus glabriusculis, foliis angusto-linearibus.

Desc. *Gramen* 4-6-unciale, glabrum, erectum; *radice* fibrosa. *Culmi* foliati, basi quandoque divisi, læves. *Folia* angusto-linearia, plana, acuta, glabra, lævia; *vaginæ* subcylindraceæ, læves, suprema folio proprio longior, omnes ipsa basi integra; *ligula* subquadrata tam lata quam longa, apice dentato dente medio paulo longiore. *Panicula* erecta, angustata, circumscriptione lineari-lanceolata, ramis paucifloris, pedicellis denticulatis, strictis, viridibus, apice paulo dilatato, cum locusta haud omnino continuo. *Locustæ* oblongæ, coloratæ, sæpius quadrifloræ. *Glumæ* hyalinæ, glaberrimæ, uninerviæ, cum pedicellis persistentes, valvula inferiore fere dimidio minore; superiore duplo latiore et fere duplo longiore, obtusiore, perianthio dimidio circiter brevior, nervis lateralibus obsoletis. *Perianthia* separatim decidentia, rachi locustæ glabra; *valvula inferior* oblonga, concava, acutiuscula, apice scarioso eroso-denticulato, quinquinervis, lateribus infra medium pube rara in nervis extimis crebriore instructis, ipsa basi absque lana implexa; *superior* paulo brevior, dinervis, nervis viridibus, denticulatis, lateribus complicatis. *Lodiculæ* 2, hyalinæ, imberbes, semibifidæ. *Stamina* 3.

58. *POA ABBREVIATA*, panicula simplicissima coarctata subovata, locustis 4-5-floris, glumæ valvulis subæqualibus acutissimis perianthia basi lanata lateribus pubescentia æquantibus, foliis involuto-setaceis.

Desc. *Gramen* 3-4-unciale. *Culmi* foliati, basi sæpe divisi, læves. *Folia* involuta, subsetacea, retrorsum scabra, *vaginæ* fere ad basin usque fissæ, cylindraceæ. *Panicula* vix semuncialis, ramis alternis, subbifloris, strictis, lævibus, vix denticulatis. *Locustæ* oblongæ, coloratæ. *Glumæ* acutissimæ, valvulis longitudine subæqualibus, carinatis, glaberrimis, *inferiore* manifeste angustiore, paululum brevior, uninervi; *superiore* basi trinervi. *Perianthia* glumas paulo superantia; *valvula inferior* ipsa basi lana implexa parca instructa, carina à basi ad duas tertias partes longitudinis sericea, linea pariter sericea utriusque margini approximata,

à basi ad eandem fere altitudinem attingenti, intersticiis pubescentibus subsericeis; *superior* dinervis, nervis pectinatim denticulatis, lateribus induplicatis latiusculis. *Lodiculae* 2. *Stamina* 3, antheris stramineis. *Ovarium* imberbe. *Stigmata* 2, subsessilia, plumosa, hyalina.

59. *POA ARCTICA*, panicula effusa: ramis paucifloris capillaribus laevibus locustisque coloratis ovatis 3-4-floris, glumis subaequalibus, perianthii valvula inferiore basi lanata carina lineaque submarginali sericeis: intersticiis pubescentibus, foliis linearibus: ligula subquadrata erosa.

Poa laxa, Br. in Ross' voy. ed. 2. v. 2. p. 192.. Hooker in Scoresby's greenl. p. 410. non Willdenovii.

DESC. *Gramen* 5-8-pollicare. *Culmi* erecti v. adscendentes, basi quandoque divisi, graciles, laeves, foliati. *Folia radicalia* angusto-linearia, canaliculata, culmo aliquoties breviora; *culmea* paulo latiora, plana, marginibus laevibus, denticulis obsoletissimis: *vaginae* strictae, striatae, laeves, ipsa basi integra; *ligula* subquadrata, nunc paulo longior quam lata, apice eroso-inciso. *Panicula* saepius effusa, nunc rara, nunc minus effusa, rarissime subcoarctata, rachi ramisque fuscis, ramis 3-4, semiverticillatis, 1-2-floris, capillaribus, laevibus. *Locustae* ovatae v. oblongo-ovatae, fusco-purpureae, apicibus valvularum stramineo-fuscis ipsoque margine albo, 3-4-florae, cum rudimento minuto scarioso longius pedicellato quarti v. quinti: rachi articulatum solubili, per lentem scabriuscula. *Glumae* subaequivalves, carinatae, acutae, fusco-purpureae, glaberrimae, carina extra medium obsoletissime denticulata; *inferiore* angustiore, nervis lateralibus obsoletioribus, altero obsoletissimo; *superiore* vix longiore, nervis lateralibus manifestioribus. *Perianthii valvula inferior* oblonga, subcarinata, ipsa basi v. potius ex apice articuli racheos lana longa contortuplicata flosculos subnectenti, carina à basi ad duas tertias partes longitudinis sericea, villis brevibus, supra obsoletissime denticulata, lateralibus à basi ad eandem circiter altitudinem ac portio sericea carinae pubescentibus, linea intramarginali sericea: *valvula superior* inferiore paulo brevior, dinervis, nervis viridibus, pectinato-ciliatis pilis brevibus, lateribus induplicatis axin fere attingentibus. *Lodiculae* 2, cuneiformes, semibifidae dentibus acutis, hyalinae, imberbes, ovario breviores. *Stamina* 3, antheris stramineis. *Ovarium* oblongum, imberbe. *Styli* 2, brevissimi. *Stigmata* hyalina, laxa plumosa ramis denticulatis.

Obs. Exemplaria nonnulla statura majore, locustis acutioribus, glumis acuminatis perianthia inferiora subaequantibus, foliis latioribus.

Poa laxa Willden. sp. pl. 1. p. 386., quam ex eodem monte Silesiae ubi à b. Haenke detecta fuit habeo à D. Trevirano communicatam, differt statura minore, panicula coarctata, rachi ramisque paniculae et glumis infra medium viridibus, perianthiis acutioribus lana baseos parciore; locustae rachi laevi.

Poa flexuosa Host gram. austr. 4. p. 15. t. 26. quae similis videtur *P. arcticae* panicula effusa et locustae colore figura et pubescentia, differt paniculae rachi ramisque viridibus magis divisus scabris, glumarum carinis longitudinaliter denticulatis.

60. *FESTUCA BREVIFOLIA*, racemo subsimplici erecto, flosculis teretibus supra scabriusculis arista duplo longioribus, foliis setaceis vaginisque laevibus: culmeo supremo multoties brevioris vagina sua laxiuscula.

Obs. Facies et statura forte *F. ovinae* inter quam et *F. Halleri* media; priori forsitan nimis affinis.

61. *FESTUCA VIVIPARA*.

Obs. Nullam observationem habeo de exemplari unico *Festucæ* cujusdam viviparæ olim viso in herbario D. Sabine, ulterius examinando.

PLEUROPOGON.

CHAR. GEN. *Locustæ* multifloræ, cylindraceæ. *Gluma* abbreviata, inæquivalvis, mutica. *Perianthii valvula inferior* mutica, obtusa, concava, nervosa, apice scarioso: *superior* nervo utroque lateraliter biseto! *Lodiculæ* distinctæ. *Styli* 2. *Stigmata* plumosa. *Caryopsis* libera, lateribus compressis.

Gramen elegans. Folia plana, angusta, vagina integra, ipso apice tantum fissio. Racemus simplex, locustis cernuis, purpureis, nitentibus. *Gluma valvula inferiore acuta, superiore latiore obtusa. Perianthia distincta, valvula inferiore 5-7-nervi, superiore lanceolata emarginata, pari superiore setarum brevissimo.*

Obs. Genus *Glyceriæ* proximum, quacum locustis teretibus, perianthiis obtusissimis et vaginis foliorum integris convenit; differt præsertim setis lateralibus nervorum valvulæ superioris perianthii, lodiculis distinctis, stigmatibus haud decompositis, caryopside lateraliter compressa et inflorescentia.

Character fere essentialis in nervis valvulæ superioris perianthii latere setigeris; analoga structura enim vix, quantum scio, in ullo alio gramine obtinet nisi in *Uniola latifolia Mich. am.*, ubi equidem nullis aliis differentiis comitata pro characterem specifico tantum habenda.

62. *PLEUROPOGON SABINII*—Tab. D.

Desc. *Gramen* 3-unciale usque spithameum, glabrum. Culmi erecti, foliati, striati, læves, simplices. Folia radicalia angustiora, longiora; culmea linearia, plana, brevia, lævia: vaginæ paulo compressæ, striatæ, glabræ, læves, fere ad apicem integræ, ipso apice fissio, marginibus scariosis, suprema folio proprio longior: ligula brevissima, rotundata, emarginata. Spica racemosa, simplicissima, rachi striato-angulata, lævi, viridi, pedunculis lateralibus glumam vix superantibus, recurvis, lævibus, indivisis, alternis, distantibus. Locustæ subcylindraceæ, cernuæ v. pendulæ, semunciales, purpureæ, nitidæ, per lentem tenuissime pubescentes. Gluma bivalvis, nana, inæqualis, membranacea, purpurea, mutica; valvula inferiore ovata,

acuta; *superiore* obovata, obtusissima, inferiore duplo latiore, paulo longiore. *Perianthia* alterna, distincta. *Valvula inferior* obovato-oblonga, obtusissima, concava, quinquinervis, extus pube brevissima appressa conspersa, apice marginibusque ab apice ad medium albis, scariosis, nervis omnibus infra apicem desinentibus, medio in mucronulum brevissimum, marginem valvulae vix attingentem producto. *Valvula superior* longitudine fere inferioris, manifeste angustior, elliptico-lanceolata, apice profunde emarginato, lateribus induplicatis, dinervis, nervis brevissime ciliatis, singulis bisetis, *setis* lateralibus, per paria oppositis, *duae inferiores* infra medium valvulae ortae, subulato-filiformes, strictae, modice patentes, denticulae, longitudine circiter dimidii totius valvulae; *duae superiores* paulo supra medium valvulae ortum ducentes, brevissimae, denticulae, mucroniformes, altera quandoque obsoleta. *Lodiculae* 2, collaterales, approximatae, brevissimae, truncatae, basi leviter cohaerentes, sed absque laesione separandae. *Stamina* 3, filamentis capillaribus, antheris linearibus utrinque semibifidis. *Ovarium* ovatum, imberbe. *Styli* 2, glabri. *Stigmata* laxa plumosa, hyalina, ramis denticulatis, superioribus vix brevioribus. *Caryopsis* libera, lateraliter compressa, ventre angusto-lineari, leviter canaliculato, axi longitudinaliter saturiore. *Embryo* caryopside triplo brevior.

Obs. Duplex varietas.

α. elatior, subspithamea, antheris stramineis. Tab. D. f. 1—7.

β. 3-4-uncialis, antheris purpureis. Tab. D. f. 8—10.

The specific name is given in honour of Captain Edward Sabine, in whose herbarium, the most extensive formed in the voyage, numerous specimens were found of both varieties of this remarkable grass.

EXPLICATIO TABULAE D.

PLEUROPOGON SABINII. 1. Varietatis *α.* planta magnitudine naturali. 2. ejusd. locusta cum pedunculo et portione racheos magis aucta. 3. perianthium clausum articulo racheos insidens, auctius. 4. id. expansum, pariter auctum. 5. valvula superior perianthii facie visa ad id. augment. 6. pollen. 7. flosculus perianthio orbatus exhibens stamina pistillum et lodiculas auct. uti 4 et 5. 8. Var. *β.* planta mag. natur. 9. ejusd. locusta cum pedunculo ad augm. id. ac 2. 10. perianthium expansum genitalia et lodicularum alter exhibens ad augm. n. 4.

DUPONTIA.

CHAR. GEN. *Gluma* subaequivalvis, scariosa, concava, mutica, locustam 2-3-floram subaequans. *Perianthia* mutica, scariosa, (basi barbata,) altero pedicellato; valvulis integris, inferiore concava. *Lodiculae* 2. *Ovarium* imberbe. *Stigmata* subsessilia. *Caryopsis* - - -

Gramen glabrum, erectum. Folia linearia, plana, vaginis semifissis, basi integra. Panicula simplex, coarctata, fusco et purpurascenti varia, pedicellis cum locustis continuis, perianthiis separatim solubilibus.

Obs. Ad Deschampsiam proxime accedit hocce genus; distinguitur perianthiis muticis, valvulis integris nec dentatis. Cum Catabrosa, facie diversissima, convenit pluribus notis, differt glumis locustam subæquantibus, perianthiis basi brevè barbatis. A Poa diversum locustis haud compressis, glumis perianthisque concavis nec carinatis. Ad confirmandum genus caryopsis desideratur.

This genus is named in honour of Monsieur Dupont, of Paris, author of a valuable essay on the Sheath of the leaves of Grasses, and of observations on the genus Atriplex.

63. DUPONTIA FISHERI.

Desc. *Gramen* 6-10-unciale, erectum. *Culmi* simplices, foliati, læves, glaberrimi. *Folia radicalia* et inferiora culmi canaliculata, angusto-linearia, acuta, lævia, 2-3-uncialia, *vaginis* strictis, scariosis, vix ad medium fissis; *culmea* 1-2-superiora breviora, plana, lævia, vaginis propriis laxiusculis foliaceis ultra medium fissis longiora: *ligula* medioeris, obtusa, subtruncata, imberbis. *Panicula* coarctata, spiciformis, basi quandoque interrupta, purpureo-fusca, niteus, sesquiuncialis—biuncialis, ramis subgeminatis, paucifloris, pedicellisque lævibus cum locusta continuis. *Locustæ* ovatæ, bifloræ, cum rudimento clavato setuliformi tertii flosculi, nunc trifloræ flore tertio completo, nunc bifloræ absque tertii rudimento. *Gluma* bivalvis, subæqualis, mutica, glaberrima, purpurascens, subnitens, margine pallido scarioso, longitudine locustæ. *Valvulæ* concavæ nec carinatæ, oblongo-lanceolatæ, *inferior* paulo angustior, acuminata v. acutissima, uninervis; *superior* semi-trinervis, medio paulo infra apicem lateralibus longe intra marginem evanescentibus. *Perianthia* subconformia; *inferius* intra glumam subsessile, à pedicello brevissimo separabile; *superius* cum apice paulo dilatato pedicelli brevis articulatum, facile solubile; utriusque *valvula inferior* ovata mutica obtusa, vix unquam acuta, integra, concava, ipsa basi pilis brevibus strictis albis barbata, et à basi fere ad medium pilis brevioribus strictis subadpressis subsericea, trinervis, nervis lateralibus intra marginem evanescentibus, medio paulo infra apicem desinente: *superior* longitudine inferioris, manifeste angustior, lineari-oblonga, glaberrima, dinervis, nervis brevibus, intersticio lineari concaviusculo. *Lodiculæ* duæ, distinctæ, collaterales, membranaceæ, hyalinæ, subovate, v. cuneatæ, apice eroso-dentato, ovario longiores. *Stamina* 3, filamentis distinctis, capillaribus, antheris fusco-purpureis, linearibus utrinque bifidis. *Ovarium* ovale, glabrum. *Stigmata* 2, subsessilia, hyalina, dense plumosa, ramis apicem versus brevioribus.

Obs. The specific name is that of Mr. Fisher, whose herbarium contained the most complete series of specimens of this grass.

64. DESCHAMPSIA BREVIFOLIA, panicula coarctata lanceolata: pedicellis lævibus, locustis 2-3-floris, arista stricta valvulam subæquante, foliis involutis: caulinis abbreviatis.

Desc. *Gramen* 3-5-unciale, glabrum. *Culmi* simplices, erecti, foliati. *Folia* inferiora involuto-subulata, stricta, uncialia—sesquiuncialia; *vaginis* strictis, folio brevioribus, ipsa basi integra: *ligula* oblonga, lacinulata; *supremum* brevissimum, vagina elongata, laxiuscula, *ligula* brevior. *Panicula* coarctata, lanceolata v. oblonga, fusco-purpurascens, scariosa, ramis semiverticillatis. *Locustæ* bifloræ, raro trifloræ, semper cum rudimento, pedicelliformi

flosculi alterius. *Gluma* subæquivalvis, mutica, acuta, valvulis lanceolatis, concavis, acutissimis, scariosis, disco purpurascenti, limbo pallido, uninerviis, locusta paulo brevioribus. *Perianthia* subuniformia, scarioso-membranacea, separatim solubilia, inferius sessile; *valvula inferior* ipsa basi barbata, pilis brevibus, strictis, albis, cæterum glabra, concava, subquinquinervis, nervis omnibus lævibus, lateralibus obsoletis, apice crosso-multidentato, dorso sæpius infra medium aristata, arista setacea, recta, denticulata, valvulam ipsam vix vel paulo superanti: *superior* longitudine inferioris, angustior, dinervis, apice bidentato, quandoque semibifido. *Lodiculae* 2, collaterales, hyalinae, imberbes, acutæ, ovario longiores. *Stamina* 3, antheris purpureis, utrinque bifidis. *Ovarium* glabrum. *Stigmata* 2, sessilia, hyalina, dense et breve plumosa. *Flosculus superior* pedicello barbato quocum articulatus insidens, paulo minor, arista valvulae inferioris medio vel supra medium dorsi inserta. *Rudimentum* flosculi tertii *setula* est extus longitudinaliter barbata, clavula scariosa minutissima terminata.

β. *Perianthia* mutica.

Hujus quatuor exemplaria tantum visa à varietati α. facie paulo diversa folio supremo longiori.

TRisetum.

Triseti species *Palis. agrostr.* p. 88. caractere reformato.

CHAR. GEN. *Locustæ* 2-5-floræ, ancipites. *Gluma* carinata, membranacea, subæquivalvis. *Perianthii valvula inferior* carinata apice bidentata v. biseta, dorso (supra medium) aristata. *Caryopsis* libera, exsulca, lateraliter compressa.

Gramina cæspitosa; vaginis longitudinaliter fissis. *Panicula sæpe coarctata, aristis arcuato-patulis.*

Obs. A *Deschampsia* differt locustis ancipitibus, glumis carinatis, perianthii valvula inferiore carinata apice attenuato bidentata v. biseto, caryopside lateraliter compressa. Ab *Avenis* plerisque glumis perianthiisque carinatis; ab omnibus caryopside exsulca et lateribus compressis.

65. TRisetum SUBSPICATUM, *Palis. agrostr.* p. 88. Trisetum airoides, *Roem. et Sch. syst.* 2. p. 666. exclus. syn. Wulfen et Host. *Richardson in Franklin's journ.* p. 791.

Aira spicata, *Linn. sp. pl. ed. 2. p. 95. fl. lapp. n. 47. Flor. Dan. t. 228. mala. Gunn. norv. n. 422. Wahlenb. lapp. p. 33.*

Aira subspicata, *Linn. syst. nat. ed. 12. v. 2. p. 91. Willden sp. pl. 1. p. 377. Pers. syn. 1. p. 77. Zag. pl. island. in Olafs. reise 2. p. 234. Giesecke greenl. in Brewster's Edin. encyclop.*

HIEROCHLOE.

Hierochloe Gmel. sib. 1. p. 100. Br. prodr. flor. nov. holl. p. 208. Trin. agrostr. p. 130. Hierochloa et Toresia, Palis agrostr. p. 62 et 63.

CHAR. GEN. *Gluma* subæquivalvis, locustam trifloram æquans. *Perianthia* bivalvia, *lateralia* mascula, triandra; *terminale* hermaphroditum, diandrum.

Obs. Relationem veram Anthoxanthi ad Hierochloem, in prodr. flor. nov. holl. p. 209, primum indicatam, optime confirmat planta Javanica intermediæ structuræ à D. Horsfield detecta; in hac enim perianthium *lateralium inferius* masculum bivalve, *superius* univalve, neutrum: *terminale* hermaphroditum. Hujus novi generis (*Ataxia*) habitus potius est Anthoxanthi, quocum etiam *gluma* inæquivalvi quadrat.

Cum Hierochloe characteribus nonnullis convenit *Arthrochloa nob.* (*Holcus Palis. Trinii*, et *Wahlenb.* non *Linnæi gen. et sp. pl. ed. prima*, nec *Schreberi* nec *Gartneri*;) quæ tamen facile distinguitur ab hoc genere uti et ab *Aira* et *Arhenathero*, *gluma* cum apice *pedicelli* articulata et unâ cum locusta decidua.

66. HIEROCHLOE ALPINA, Roem. et Sch. syst. 2. p. 515. Br. in Ross' voy. ed. 2. vol. 2. p. 194. Richardson in Franklin's journ. p. 731.

Holcus alpinus, Swartz in Schrad. neue journ. 2. st. 2. p. 45. t. 3. Wahlenb. lapp. p. 31. t. 2. Svensk bot. 438. Flor. Dan. 1508. Giesecke greenl. in Brewster's Edin. encyclop.

67. HIEROCHLOE PAUCIFLORA, racemo simplici, flosculo masculino superiore brevissime setigero, foliis culmi brevissimis; radicalibus involutis.

Desc. *Gramen* 3-5-unciale. *Radix* repens. *Culmi* erecti, infra foliati supra nudi, striati. *Folia radicalia* subulata, marginibus involutis, culmo aliquoties breviora; *culmea* abbreviata, latè subulata, marginibus inflexis, vaginis suis laxiusculis multoties breviora. *Racemus* erectus, simplex vel subsimplex, pauciflorus, pedicellis lævibus. *Locustæ* ovatæ, acutæ, trifloræ. *Glumæ* bivalves, scariosæ, ovatæ, concavæ, acutiusculæ, glaberrimæ, locustam subæquantes, valvula inferiore manifeste minore. *Flosculi laterales* masculi, triandri, bivalves, chartacei, *valvula inferior* ovata, concava, marginibus infra medium nudiusculis supra omnino nudis, flosculi superioris mox sub apice emarginato setigera, seta brevissima stricta valvulam vix superante; flosculi inferioris mutica v. per-obsolete setigera; utriusque valvula superior angustior, linearis, dinervis, semibifida. *Flosculus terminalis* hermaphroditus, diander, muticus: *valvula inferior* concava, quinquinervis, extra medium dorso lateribusque pilosiusculis, chartacea, fusca, apice scarioso; *superior* linearis, hyalina, glabra, acuta, indivisa, uninervis. *Lodiculæ* 2, collaterales, lanceolatæ, acuminatæ, hyalinæ, ovario longiores. *Ovarium* glabrum. *Styli* 2. *Stigmata* alba, dense plumosa.

ACOTYLEDONES.

MUSCI.

68. *POLYTRICHUM PROPINQUUM*, caule simplici elongato, foliis margine serrulatis dorso lævibus.

Obs. Species, absque fructificatione haud determinanda, à *Polytricho* communi satis diversa videtur.

69. *POLYTRICHUM HYPERBOREUM*, caule ramoso, foliis piliferis marginibus induplicatis discum (totum lamelliferum) operientibus, capsula tetragona apophysata.

Desc. *Caules* sæpius ramosi ramis fastigiatis, nunc simpliciores innovatione una alterave divisi. *Folia* è dilatata semivaginantia basi subulata, madore patula, siccitate appressa, disco toto lamellifero; marginibus latis, induplicatis, integerrimis, membranaceis à basi dilatata usque ad apicem altero alterum equitante; *pilus* apicis hyalinus folio aliquoties (2-3-plo) brevior, per lentem denticulatus, strictus. *Masculi flores* disciformes, in distincto individuo sæpe minore. *Seta* nitens caulibus procerioribus (biuncialibus) subsimplicibus brevior, fastigiato-ramosos superans v. æquans. *Capsula* erecta v. inclinans tetragona, angulis in aciem attenuatis; apophysis angulata angustior. *Operculum* hemisphæricum cum mucronulo brevi. *Peristomium* dentibus 64. *Epiphragma* demum separabile. *Calyptra exterior* è villis dense implexis.

Obs. Duplex varietas.

α. caulibus fastigiato-ramosis setam vix æquantibus.

β. caulibus innovando subramosis seta longioribus.

Hæc *P. pilifero* proxima ab eodem differt caulibus elongatis innovando ramosis, pilis folio aliquoties brevioribus.

70. *POLYTRICHUM BREVIFOLIUM*, caule ramoso, foliis serrulatis muticis madore erectis siccitate appressis, capsula inclinata obovata exapophysata.

Desc. *Muscus* sesquiuncialis. *Caules* divisi, ramis fastigiatis. *Folia* è basi dilatata semi-membranacea subulata, extra medium serrulata, acuta, mutica, disco toto lamellifero, dorso lævi. *Seta* lævis, pallida. *Capsula* lævis, cernua, inæquilatera. *Operculum* conico-hemisphæricum, rostro subulato recurvo diametrum baseos vix æquante. *Peristomii* dentes 40, æquidistantes, intersticiis angustiores. *Epiphragma* crassiusculum. *Calyptra exterior* è villis arcte implexis.

Obs. *Muscus*, cujus tria tantum exemplaria à nobis visa in herbario D. Ross, nimis forsitan affinis *P. alpino* L.

71. *POLYTRICHUM SEPTENTRIONALE*, Sw. in act. holm. 1795. p. 270. *Musc. suec.* p. 107. t. 9. f. 18. *Menzies in Linn. soc. transact.* 4. p. 82. t. 7. f. 5.
Obs. In herbario D. Fisher absque fructificatione visum, ideoque dubium.

72. *POLYTRICHUM LEVIGATUM*, Wahlenb. lapp. p. 349. t. 22. *Hooker musc. exot.* t. 81. *Catharinea lævigata*, Bridel mant. p. 202.

Catharinea glabrata, Hooker isl. 2. p. 340. et 1. p. 24.

Obs. *Peristomii dentes* sæpius quantum determinare potui 16, quandoque 32, lineares, acutiusculi, hyalini, per lentem longitudinaliter striati, striis sæpius paulo flexuosis, in hemisphærium conniventes; dum 16 approximati intersticiis angustissimis, parum inæquales, latioribus nunc bidentatis; dum 32 æquales, intersticiis manifestis. *Epiphragma* hyalinum, diametro longitudinem dentis vix æquante. *Membrana interior capsulæ* exteriori approximata, intus lævis absque processibus plicisve. *Columella libera*, angulata, longitudine fere capsulæ. *Capsula* per lentem modice augmentem manifeste areolata.

73. *HYPNUM NITENS*, Hedw. sp. musc. p. 255. *Smith brit.* 3. p. 1316. *Engl. bot.* 1646. *Musc. brit.* p. 100. *Wahlenb. lapp.* p. 381.

74. *HYPNUM CORDIFOLIUM*, Hedw. stirp. crypt. 4. p. 97. t. 37. *Sp. musc.* p. 254. *Smith brit.* 3. p. 1318. *Engl. bot.* 1447. *Musc. brit.* p. 107.

75. *HYPNUM ADUNCUM*, Linn. sp. pl. ed. 2. p. 1592. *Smith brit.* 3. p. 1327. *Hedw. stirp. crypt.* 4. p. 62. t. 24. *Sp. musc.* p. 295.

76. *LESKIA RUFESCENS*, Schwaegr. suppl. 1. sect. post. p. 178. t. 86.

Hypnum rufescens, Dicks. crypt. fasc. 3. p. 9. t. 8. f. 4. *Smith brit.* 3. p. 1316. *Engl. bot.* 2296. *Musc. brit.* p. 99.

77. *MNIUM TURGIDUM*, Wahlenb. lapp. p. 351. t. 23. *Schwaegr. suppl.* 1. sect. post. p. 123. t. 77. *Br. in Ross' voy. ed.* 2. vol. 2. p. 194. *Richardson in Franklin's journ.* p. 756.

78. *TIMMIA MEGAPOLITANA*, Hedw. stirp. crypt. 1. p. 83. t. 31. *Sp. musc.* p. 176. *Schwaegr. suppl.* 1. sect. post. p. 84. *Richardson in Franklin's journ.* 756. *Timmia cucullata*, Michaux am. 2. p. 304.

79. *BRYUM ROSTRATUM*, Schrad. spicil. p. 72. *Smith brit.* 3. p. 1369. *Engl. bot.* 1745. *Musc. brit.* p. 126. t. 30. *Mnium rostratum*, Schwaegr. suppl. 1. sect. post. p. 136. t. 79.

Obs. *Muscus* hicce, necnon sex proxime præcedentes absque fructificatione tantum visi.

80. *BRYUM CALOPHYLLUM*, foliis ovatis obtusis concavis : marginibus simplicibus integerrimis, capsulis obovatis pendulis.

Desc. *Cæspites* densi. *Caules* innovationibus continuis divisi, 2-5-unciales, vetusti tomento radicali copioso et foliis emarcidis tecti. *Rami annotini* fastigiati, basi tantum tomento radicali parciori instructi, supra glabri. *Folia* uniformia, sparsa, approximata, ovata v. subovalia, modice concava, obtusa, mutica, marginibus simplicibus nec recurvis nec incrassatis, areolis subrotundis, uniformibus, nervo valido, apicem folii attingenti absque mucronulo excurrenti, sæpius purpurea, quandoque viridia, madore patenti-erecta, siccitate appressa et paulo undulata. *Seta* terminalis, ramos annotinos superans, castanea, lævis, apice arcuato-recurvo. *Capsula* obovata, basi acutiuscula, vix attenuata, lævis. *Operculum* concolor, hemisphæricum, papilla minuta. *Peristomium* duplex, *exterius* dentibus 16, rufescentibus acumine pallidiore, transversum striatis; *interius* album, è membrana lata leviter carinata, terminata ciliis 16, imperforatis, cum dentibus exterioris alternantibus, intersticiis subdenticulatis.

Obs. Peristomii structura Pohliæ accedit.

81. *POHLIA BRYOIDES*, foliis ovato-lanceolatis acuminatis integerrimis margine recurvis, capsulis pyriformi-oblongis, operculo conico, floribus masculis capitato-discoideis.

Desc. *Cæspites* densi. *Caules* innovatione continuo ramosi, infra tomento radicali castaneo-rufo reliquisque foliorum tecti. *Folia* læte viridia, ovato-lanceolata, acuminata, nervo valido, in acumen excurrenti, marginibus integerrimis augustissime recurvis, areolis parvis oblongo-trapezoides. *Masculi Flores* monoici, ramos annotinos terminantes, gemmaceo-discoidei, foliis perigonalibus exterioribus erectis, intimis nanis. *Antheræ* numerosæ, cylindraceæ, brevissime pedicellatæ. *Paraphyses* filiformes, articulatæ. *Feminei Flores* terminales; *vaginula* capsulæ maturæ pistillis abortivis numerosis paraphysibusque fere ad apicem truncatum stipata. *Seta* mediocris, lævis, fusca, apice arcuato. *Capsula* pendula, fusca, lævis, oblongo-pyriformis, basi attenuata in apophysim obconicam ipsa theca brevior. *Operculum* hemisphærico-conicum, capsula quandoque paulo saturatius. *Annulus* latiusculus, striatus. *Peristomium* duplex: *exterius* dentibus 16, acuminatis, integerrimis, transversim striatis, fusco-rufescentibus, acumine pallido; *interioris* membrana vix carinata, ciliis 16 cum dentibus exterioris alternantibus, absque intermediis minoribus, cum exteriori diu cohærens sed demum liberum.

82. *POHLIA ARCTICA*, foliis (viridibus) ovato-lanceolatis acuminatis: marginibus integerrimis recurvis, capsulis pyriformi-oblongis, operculo hemisphærico, floribus hermaphroditis.

Obs. *Musci* per singula fere puncta præcedenti simillimus, præter flores hermaphroditos et operculum hemisphæricum: ambo forsitan ad unam eandemque speciem polygamam pertinentes. *Flores* gemmacei, terminales, foliis perichætalibus interioribus nanis. *Antheræ* numerosæ, cum pistillis vix paucioribus intermistæ, et cum horum abortientibus paraphysibusque filiformibus vaginulâ capsulæ maturæ fere ad ejusdem apicem insidentes. *Peristomium* inte-

rius structura præcedentis pariterque cum exteriori diu cohærens, demum vero liberum et in omni statu separabile. Huic et præcedenti valde affinis videtur *Ptychostomum compactum* Hornschuch, et Schwægr. suppl. 2. sect. 1. p. 56. t. 115., cui peristomium interius cum exteriori arctius cohæret. Hujus generis? alteram speciem arcticam habeo, *Ptychostomum pulchellum*, capsula sphaerico-obovata, operculo hemisphaerico mutico, dentibus peristomii exterioris apice liberis basi mediante membrana (peristomio interiore) coherentibus, foliis ovato-lanceolatis acuminatis integerrimis.

83. *POHLIA PURPURASCENS*, foliis (purpurascensibus) ovato-lanceolatis acutissimis: marginibus integerrimis recurvis, capsulis pyriformi-oblongis, operculo hemisphaerico obtuso, floribus hermaphroditis.

Obs. Præcedentis forsân varietas, vix distinguenda nisi notis supra datis.

Propter peristomii interni structuram hanc cum duabus præcedentibus ad *Pohliam retuli*, facies tamen potius *Bryi* est, et omnes *B.* cæspiticio quam maxime affines.

84. *TRICHOSTOMUM LANUGINOSUM*, Hedw. stirp. crypt. 3. p. 3. t. 2. *Sp. musc.* p. 109. Schwægr. suppl. 1. sect. 1. p. 149. Smith brit. 3. p. 1240. Engl. bot. 1348. Turner musc. hibern. p. 38. Musc. brit. p. 60. t. 19. Hooker scot. par. 2. p. 134. Wahlenb. lapp. p. 329. Richardson in Franklin's journ. p. 755.

Racomitrium lanuginosum, Brid. mant. p. 79.

Obs. Specimina pauca et absque fructificatione.

85. *DIDYMODON CAPILLACEUM*, Schrad. spicil. p. 64. Sw. in act. holm. 1795, p. 237. Musc. succ. p. 28. Roth. germ. 3. p. 199. Web. et Mohr. tasch. p. 155. Schkuhr deut. moos. p. 66. t. 29. Wahlenb. lapp. p. 314. Carpat. p. 336. Voit musc. herbip. p. 34. Musc. brit. p. 67. t. 20. Brid. mant. p. 100. Hooker. scot. par. 2. p. 136. Richardson in Franklin's journ. p. 755.

Swartzia capillacea, Hedw. stirp. crypt. 2. p. 72. t. 26.

Cynodontium capillaceum, Hedw. sp. musc. p. 57. Schumacher. salland. 2. p. 40.

Cynodontium capillaceum, Schwægr. suppl. 1. sect. 1. p. 114.

Trichostomum capillaceum, Smith brit. 3. p. 1236. Engl. bot. 1152. Turner musc. hibern. p. 35.

Bryum capillaceum, Dicks. crypt. fasc. 1. p. 4. t. 1. f. 6.

Bryum tenuifolium, Villars dauph. 4. p. 868.

Bryum n. 1806. Hall. hist. 3. p. 44. t. 45. p. 1.

Obs. Duas varietates à Melville Island habeo, quarum

α. statura et foliis laxiusculis cum *D. capillaceo* europæo convenit, paululum differt capsulis ovalibus nec oblongis.

β. statura humiliore, foliis strictioribus et brevioribus; media quasi inter *D. capillaceum* vulgare et *D. subulatum* Schkuhr deut. moos. p. 65. t. 28., quod ad eandem speciem pertinere videtur.

In utraque varietate atque in *D. capillaceo* *Richardson, l. c.* flores monoicos, masculis gemmiformibus alaribus prope apicem ejusdem rami cum femineo gemmiformi, necnon annulum manifestum, in *D. capillaceo*, jamjam à Voito l. c. notatum, et dentes peristomii 16 bipartitos cruribus transversim connexis observavi.

86. *BARBULA LEUCOSTOMA*, caule subsimplici, foliis ovato-lanceolatis mucronulatis integerrimis, capsula cylindracea erecta, operculo conico, peristomii dentibus obliquis apice tortis.

Desc. *Muscus* cæspitosus, semurcialis. *Caules* breves, dense foliati, sæpius indivisi, quandoque parum ramosi. *Folia* mucrone brevissimo, minute areolata, marginibus anguste revolutis, nervo valido, siccitate adpressa et parum torta. *Seta* caule longior, lævis, fusca. *Capsula* lævis, æquilatera. *Operculum* conicum, acutum, paulo inclinans, capsula dimidio brevius, tenuissimè spiraliter striatum. *Peristomium* album, dentibus 32, filiformibus, per paria approximatis, dimidioque inferiore trabeculis connexis, supra distinctis, apicibus parum tortis. *Calyptra* lævis.

Obs. Inter *Barbulam* et *Didymodon* media.

87. *SYNTRICHIA RURALIS*, *Web. et Mohr tasch. p. 215.* *Voit mus. herbip. p. 52.* *Brid. mant. p. 98.*

Tortula ruralis, *Smith brit. 3. p. 1254.* *Engl. bot. 2070.* *Turner musc. hibern. p. 50.* *Sw. musc. suec. p. 99.* *Schwaegr. suppl. 1. sect. 1. p. 137.* *Wahlenb. carpat. p. 338.* *Musc. brit. p. 31. t. 12.* *Hooker scot. par. 2. p. 127.* *Richardson in Franklin's journ. p. 755.*

Barbula ruralis, *Hedw. sp. musc. p. 121.* *Wahlenb. lapp. 318.*

Obs. Specimina duo tantum et sine fructificatione.

88. *SYNTRICHIA MUCRONIFOLIA*, caule ramoso, foliis ovato-oblongis siccitate adpressis: pilo integerrimo latitudine folii brevior, capsula cylindracea inæquilatera erecta duplo longiore operculo subulato-conico.

Tortula mucronifolia, *Schwaegr. suppl. 1. sect. 1. p. 136. t. 35?* *Wahlenb. lapp. p. 317?*

Desc. *Muscus* v. cæspitosus v. aliis intermistus. *Caules* erecti, breves, semper ramosi, ramis fastigiatis, dense foliati. *Folia* concava, marginibus integerrimis, infra medium leviter recurvis, minute areolatis, areolis baseos paulo laxioribus, nervo valido in pilum integerrimum excurrente, madore erecto-patentibus, siccitate imbricatis adpressis nec contortis, pilo parum flexo. *Seta* capsula haud duplo longior, concolor, siccitate tortilis. *Capsula* saturate castanea, lævis. *Operculum* badium, per lentem pluries augmentem spiraliter striatum, dimidium capsulae vix æquans. *Peristomii* membrana alba, pulchre reticulata, longior ciliis contortis. *Calyptra* novella tantum visa, lævis.

Obs. *Syntrichia* subgenus tantum esse videtur *Barbulæ* (s. *Tortulae*), cujus dentes è membrana angusta ortum ducunt; et in speciebus omnibus utriusque quas investigavi operculum spiraliter striatum est.

De synonymis supra citatis *S. mucronifoliae* haud omnino certus sum, figura tamen *Schwaegrichenii* bene respondet, et descriptio *Wahlenbergii* in omnibus convenit nisi longitudine cupidis foliorum inferiorum.

89. *ENCALYPTA CILIATA*, *Hedw. sp. musc. p. 61?* *Schwaegr. suppl. 1. sect. 1. p. 59?* *Smith brit. 3. p. 1181?* *Engl. bot. 1418?* *Wahlenb. lapp. 311?* *Musc. brit. a. p. 35. t. 13?* *Leersia ciliata, Hedw. stirp. crypt. 1. p. 49. t. 19?*

Obs. Exemplaria nonnulla *Encalyptae* speciei in herb. D. Sabine olim visa ad hanc, ni fallor, pertinent; posthac determinanda.

90. *GYMNOSTOMUM OBTUSIFOLIUM*, foliis oblongo-ovatis obtusis integerrimis, capsula oblonga duplo longiore operculo conico columellae adnato.

Desc. *Caules* ramosi, dense foliati. *Folia* concava, infra laxiusculè supra medium minutè reticulata, marginibus planis, nervo vix apicem attingenti, madore erecto-patula, siccitate appressa et parum flexa. *Seta* fusca, laevis, caule longior. *Capsula* erecta, laevis, fusca, reticulata. *Operculum* brevè conicum, cum columella cylindracea diu cohærens.

APLODON.

CHAR. GEN. *Peristomium* simplex: *dentibus* 16, æquidistantibus, indivisis, reflexilibus. *Capsula* apophysata, erecta. *Calyptra* laevis. *Flores* terminales: *masculi* discoideo-capituliformes.

Obs. Subgenus *Splachni*, à quo differt solummodo *dentibus* 16 æquidistantibus, et forsan columella capsulae maturae inclusa. Sed quoniam axis pellucidus dentis cujusvis compositionem ejusdem indicat, ad *Systylium* (quod *Splachni* alterum subgenus,) *dentibus* 16, æquidistantibus, bipartitis, planè accedit; in hoc enim cohærentia operculi cum columella, ex analogia cum *Gymnostomis* quibusdam, pro caractere speciei tantum valoris habenda sit; et ad eandem structuram approximatio indicata est in *Splachno tenue* et *longicollo*, in quibus columella tota apice subulato persistit, quamvis ab operculo cito soluta est. Transitus ab *Aplodonte* ad *Splachnum* facilis est per *S. longicollum* (*Dicks. crypt. fasc. 4. p. 4. t. 10. f. 9.* *Americæ* occidentali nec *Scotiæ* indigenum,) cui dentes vix manifeste per paria approximati, qua nota differt à *S. tenue* valde affine sed *dentibus* geminatis reflexilibus instructo. Ad *Aplodontem* proxime accedit *Weissia Splachnoides Schwaegr.* (*CYRTODON nob.*, alterum subgenus *Splachni* quasi constituens,) diversa præsertim *dentibus* erectis apicibus incurvis, ideoque *S. Frælichiano* *dentibus* erectis sed geminatis affinis.

91. APLODON WORMSKIOLDII.

Splachnum Wormskioldii, Hornem. in Flor. Dan. 1659. Schwaegr. suppl. 2. sect. 1. p. 27. t. 108.

α. Folia acuminata.

DESC. *Muscus* late virens, dense cæspitosus. *Caules* 1-3-unciales, innovationibus repetitis ramosi, infra tomento radicali castaneo foliisque emarcidis tecti; ramis annotinis herbaceis, viridibus, foliatis. *Folia* alterna, descendendo remotiora, late viridia, ovato-lanceolata, acuminata, integerrima, laxè reticulata, nervo tenui, ad ortum acuminis concoloris, diametrum transversum folii vix æquantis, desinenti. *Masculus Flos* discoideo-capituliformis, ramum paucifolium ejusdem cum femineo vel distincti caulis terminans; *foliis perigonalibus* caulinis subconformibus, infra conniventibus coloratis, apicibus patulis viridibus. *Antheræ* numerosæ, brevissimè pedicellatæ, cylindraceæ. *Paraphyses* plures, lutescentes, articulis sursum crassioribus brevioribusque, ultimo obtuso. *Pistilla* nulla. *Femineus Flos* terminalis, masculo angustior, *foliis perichætalibus* rameis conformibus et concoloribus. *Pistilla* 3-5; *paraphysibus* paucissimis; *antheris* nullis. *Seta* ramum fructiferum subæquans, herbacea, sæpissime viridis, etiam post lapsum operculi, quandoque demum pallide fusca. *Vaginula* laxiuscula, dilute fusca, ore nigro-castaneo, quandoque inæquali, basi pistillis abortientibus stipata. *Calyptra* glabra, lævis, subcampanulata, sed altero latere fere ad apicem usque fissa, capsulâ adultâ brevior. *Apophysis* obovata, basi vix attenuata, capsulam crassitie subæquans, nunc paulo amplior, concolor, demum pallida et alte corrugata. *Capsula* erecta, cylindraceo-obovata, lævis, castanea, stomate haud coarctato et quandoque dentibus deciduis nudo, deoperculata apophysi brevior. *Peristomium* simplex, dentibus 16, æquidistantibus, lato-subulatis, indivisis, axi longitudinali semipellucido, transversim striatis, siccitate arcte reflexis, madore conniventibus, semisiccatis patulis. *Columella* capsula matura brevior, apice simplici. *Operculum* depresso-hemisphæricum, obtusissimum, altero latere stomate diutius adhærens.

β. Folia acutiuscula.

Obs. Ab *α.* differt, præter folia absque acumine et quandoque obtusiuscula, caulibus brevioribus vix uncialibus, stomate patentiore.

Planta groenlandica inter has duas varietates quasi media, cum *α.* foliis acuminatis conveniens; ad *β.* habitu propius accedens.

SPALCHNUM.

Linn. Hedw.

CHAR. GEN. *Peristomium* simplex: *dentibus* (reflexilibus) v. 8, geminatis (coalitione nunc indivisis): v. 4, quaternatis. *Capsula* erecta, apophysata. *Calyptra* glabra, lævis. *Flores* terminales: *masculi* (cum v. absque pistillis sterilibus,) discoideo-capituliformes.

Obs. In *S. octoblepharo* Insulæ Diemeni et *magellanico* peristomium octodentatum, sed *dentium* striæ longitudinales semipellucidæ eorundem compositionem indicant. In *S. angustato*, *artico* et *propinquo* peristomii dentes quaternatim approximati et basi coadunati. Dum

S. Fralichianum, et forsan *Wulfenianum*, capsula inelinata et dentibus crenatis à *Splachnis* genuinis distinguitur et subgenus efformat.

92. *SPLACHNUM VASCULOSUM*, Linn. *sp. pl. ed. 2. p. 1572.* exclus. *syn. Buxb. Medie. stirp. crypt. 2. p. 44. t. 15.* optime, *Sp. musc. p. 53. Schkuhr deut. moos. p. 41. t. 17.* iconè à supra citata Hedwigii mutuata. *Schwaegr. suppl. 1. sect. 1. p. 51. Wahlenb. lapp. p. 308. Musc. brit. p. 21. t. 31. bene. Hooker scot. par. 1. p. 125.*

DESC. *Caules* innovando subramosi, unciales, laxè foliati, inferne fibras purpureas ramosas supra-axillares nonnullas exserentes. *Folia* alterna, orbiculato-obovata, obtusissima, parum concava, basi angustata, semiamplexicaulia, marginibus integerrimis planis, nervo mox infra apicem evanescenti; *perichætalia* similia, intimis 2-3 exceptis minoribus ovatis acutiusculis. *Seta* caulem subæquans, castanea, lævis. *Vaginula* basi stipata pistillis pluribus abortivis. *Apophysis* subsphærica vel obovata, capsula duplo amplior, semisiccata rugosa, nigro-fusca. *Capsula* cylindræa, lævis, minute reticulata, fusca. *Peristomium* dentibus 16, per paria approximatis, sæpiusque ad medium, quandoque fere ad apicem, connatis, singuli axi pellucetiori tenuissimo, omnes è basi angusta annulari orti, arcu reflexiles dorso capsulæ appressi. *Columella* cylindræa, longitudine thecæ, apice dilatato, plano-depresso. *Masculi Flores* caulem distinctum paucifolium ejusdem cæspitis terminantes, capitato-discoidi; *foliis perigonalibus* extimis obtusiusculis, interioribus longioribus, è basi latiore lutescenti connati patulis, lanceolatis apice angustatis, integerrimis. *Antheræ* numerosæ, viginti plures. *Paraphyses* numerosissimæ, antheris longiores, subclavatæ, articulis superioribus crassioribus brevioribusque. *Pistilla* nulla.

Obs. Ab exemplaribus in Scotiæ montibus à D. Hooker lectis hoc paulo tantum differt foliis remotioribus et seta longiore.

93. *SPLACHNUM ARCTICUM*, peristomii dentibus quaternatim approximatis, apophysi obconica capsula clausa angustiore deoperculata latiore, operculo conico-hæmisphærico, floribus masculis sessilibus, seta perichætium bis superante, foliis ovato-lanceolatis concavis cuspidatis integerrimis.

DESC. *Muscus* dense cæspitosus. *Caules* innovationibus ramosi, sesquiunciales, infra foliis vetustis emarcidis tomentoque radiculoso copioso tecti. *Rami* annotini læte virides, foliati, basin versus foliis rarioribus et brevioribus. *Folia* lanceolata-ovata, concava, integerrima, cuspidata, cuspidè concolori fere $\frac{1}{2}$ longitudine laminæ, laxè reticulata, læte viridia. *Femineus Flos* gemmiformis, angustus. *Pistilla* 3-5, filis succulentis, paucis, hyalinis; *staminibus* nullis. *Seta* longitudine fere rami annotini, parum angulata, lævis, castanea, capsula tota, apophysi simul sumpta, duplo longior. *Capsula* vera cylindræa, lævis, nigro-castanea, ore dilatato, patulo. *Apophysis* obconica basi attenuata, capsula paulo longior. *Operculum* madore conicum, siccitate conico-hæmisphæricum mucronulo manifesto. *Peristomium* intra marginem membranæ exterioris, ubi desinet interior, ortum: *dentibus* 16, quaternatim ad medium usque connatis, singulis absque stria longitudinali manifesta. *Masculus Flos* cum femineo collateralis, ramum terminans, discoideo-capituliformis, semper sessilis, etiam dum femi-

neus, primo pariter sessilis, florescentia peracta ramulo suo proprio elongato insidet. *Folia perigonia* à basi lanceolata erecta in cuspidem basi longiorem, subulatum producta. *Antheræ* numerosæ viginti circiter, levissime arcuatæ, brevissime pedicellatæ. *Paraphyses* stramineæ, sursum incrassatæ articulis brevioribus crassioribusque. *Pistil* la nulla.

Obs. Facies omnino *S. mnioidis*, quocum pluribus notis convenit, satis diversum dentium dispositione.

94. *SPLACHNUM PROPINQUUM*, peristomii dentibus basi quaternatim coherentibus, apophysi obconica capsula operculata paulo latiore, operculo siccitate depresso mutico, floribus masculis brevè pedunculatis, seta perichætium vix superante, foliis ovatis concavis cuspidatis integerrimis.

Desc. *Cæspites* densi. *Caules* innovando divisi, unciales. *Folia* viridissima, acumine subulato-setaceo, concolori, longitudine $\frac{1}{2}$ folii. *Seta* foliis floralibus paulo longior, angulata, lævis, capsulam cum apophysi sumptam vix superans. *Capsula* cylindracea, brevis, ore dilatato. *Apophysis* primo viridis, mox fusca, capsulâ ante lapsum operculi paulo tantum crassior, demum nigricans, pyriformis, capsula deoperculata concolori fere duplo amplior. *Operculum* conico-hemisphæricum, muticum, siccitate planiusculo-depressum. *Peristomii dentes* 16, quaternatim approximati et ad medium usque coherentes, singuli absque stria longitudinali manifesta. *Columella* crasso-cylindracea, pulposa, apice hemisphærico cavitatem operculi replenti. *Masculus Flos* capitato-discoides, ramulum brevem, femineo collateralem, terminans, antheris paraphysibusque numerosis, pistillis certe nullis.

Obs. Proximum *S. arctico*, an ejusdem varietas?

95. *SPLACHNUM EXSERTUM*, capsula interiore soluta siccitate semixserta; exteriori ore dilatato, apophysi obconica capsula (concolori) angustiore, foliis lanceolato-ovatis acuminatis integerrimis.

Desc. *Caules* annotino-ramosi; *Folia* omnino *S. arctici* et propinqui. *Masculus Flos* capitato-discoides, ramulum distinctum, femineo brevior, foliatum, ejusdem caulis terminans, foliis perigonalibus basi lutescentibus, acumine brevi viridi. *Antheræ* paucæ, cylindraceæ, leviter arcuatæ: *paraphysibus* numerosis sursum crassioribus: *pistillis* nullis. *Seta* terminalis, perichætium vix superans, dilute fusca, lævis. *Capsula* cum apophysi sumpta turbinata; *theca exterior* obovata; *interior* pedicello insidens libera, demum exsiccatione exterioris exserta. *Peristomium*: *dentes* 16, mox intra marginem capsulæ exterioris orti, primo quaternatim basi coherentes, demum quaternatim vel quandoque geminatim reflexi.

Obs. Muscus valde affinis hinc *S. arctico* et propinquo inde *paradoxo*; et hi omnes adeo approximati præsertim figura et textura foliorum ut varietates unius ejusdemque speciei forsan considerari possunt.

96. *SPLACHNUM PARADOXUM*, capsula adulta absque sutura operculi (demum separabilis?); interiore pedicellata, apophysi attenuata capsula angustiore, foliis lanceolato-ovatis acuminatis integerrimis.

Desc. *Caules* vix semunciales, innovationibus ramosi. *Folia* ovato-lanceolata, concaviuscula, carinata, laxe reticulata, integerrima, acumine subulato diametrum transversum folii subaequant, demum decolori pilum referenti. *Masculi Flores* discoideo-capituliformes, terminantes ramos proprios pedunculiformes, paucifolios, foliolis nanis alternis: *folia perigonialia* lanceolata, basi conniventia, apicibus patulis acuminatis. *Antheræ* numerosæ, cylindraceæ, levissime incurvæ. *Paraphyses* numerosæ, subclavatæ. *Flos femineus* terminalis. *Seta* fusca, levis, caule longior. *Capsula* erecta, oblongo-obovata, basi in apophysin obconicam seipsa angustiore et brevior attenuata, levis, per lentem pluries augentem punctis minutis longitudinaliter seriatis, depressis, adversus lucem semipellucidis tenuissime quasi striata, absque operculo ejusve ulla indicatione, apiculo obtuso paulo constricto. *Theca vera* dimidiam superiorem tantum capsulæ exterioris occupans, pedicello cylindraceo, ex apice apophysis derivato, insidens, libera, ad ortum dentium desinens ibique cum capsula exteriori confluens. *Dentes* 16, quaternatim ad medium cohærentes, subulati, pallide fusci, apicem cavитatis capsulæ attingentes. *Semina* minutissima, in cumulo olivaceo-viridia, seorsim hyalina, lævia.

Obs. Hæc omnia è specimine unico cum capsulis 8 maturis plenis et duabus vetustis vacuis pariter clausis, varietatem nanam *S. arctici* referente, desumpta sunt. Exemplaria dein plura varietatis, ut videtur, ejusdem Musci, in herbario D. Richardson, inter Fort Enterprise et mare arcticum lecta, et cum *S. mnioidi* Schwaegr. in Franklin's *journ.* p. 755 (non Hedwigii,) intermixta inveni: horum capsulæ adultæ numerosæ cinnamomeo-fuscae, clausæ et absque sutura vel ulla alia operculi indicatione. In hac varietate β ., quæ statura major et calyptra dimidiata donata, seta longior quam in α . dentesque 16 subaequidistantes et fere ad basin distincti.

E duplicis varietatis hisce speciminibus diu in animo fuit proponere novum genus sub nomine *CRYPTODONTIS*, ob capsulam operculo destitutam dentibus verò inclusis instructam: sed omnibus iterum examini subjectis capsulam unam alteramve vetustam operculo delapso et peristomio dentato, in eodem cæspite cum clausis, et quantum determinare licuit ad eandem speciem pertinentem, observavi, ideoque ad *Splachnum*, haud tamen absque dubitatione, museum paradoxum demum retuli. In *Splachneis* autem, præter annuli defectum in tota tribu, approximationes nonnullæ ad capsulam clausam occurrunt, scilicet in *Aplodonte* ubi operculum cum altero latere stomatis diutius cohæret, et in *Systylio* in quo cum columella coherens persistit: nec transitus difficilis à *Splachneis* ad *Voitiam* habitu et statione iisdem bene convenientem.

VOITIA.

Hornschuch comment. de voit et syst. p. 5. *Hooker musc. exot.* 97. *Nees v. Esenb. et Hornsch. bryol. germ.* 1. p. 79. *Schwaegr. suppl.* 2. sect. 1. p. 2. *Greville et Arnott in Wern. soc. transact.* 4.

CHAR. GEN. *Capsula* clausa, (absque operculo dentibusve inclusis,) rostrata. *Calyptra* dimidiata, capsula adulta longior, tardius decidua. *Flores* terminales: *masculus* femineo col-laterali subconformis.

Obs. Genus à Phasco regre distinguendum, habitu quamvis necnon statione valde diversum, et ad Splachneas mediante *S. paradoxo*, (s. *Cryptodonti*) accedens. *Calyptra* multo amplior equidem et diutius remanens quam in Phasco, sed demum decidua, nec persistens. *Vaginula* in *V. hyperborea* certe indivisa, nec eandem bivalvem neque fissam in exemplaribus paucis *V. nivalis* à nobis investigatis observare licuit. In utraque specie ejusdem margo manifeste inæqualis et sublacera, sed eandem fere structuram in Phascis quibusdam, præsertim in *P. bryoidi* et curvicollo, observavimus. *Capsula* cum seta sua elongata sæpe decidua sed quandoque nec raro vel cum eadem persistens, vel à seta persistenti decidens: et seta minime post lapsum capsulæ in Phascis omnibus persistit. *Membrana interna* libera, cum processu subulato, rostrum capsulæ penetranti, in *P. bryoidi* et curvicollo pariter exstat: et florum dispositio subsimilis in Phascis nonnullis obtinet. *Semina* minutissima affinitatem *Voitiæ* cum *Cryptodonti* potius quam Phasco indicant.

Voitia vogesiana Nestl. dubia hujus generis species mihi videtur, et habitu Phascis nonnullis, præsertim *P. flexuoso Schwaegr. suppl. 2. sect. 1. p. 1. t. 101.* convenit; à *Voitia* diversa floribus sæpe dioicis, masculorum forma, capsulis basi in apophysin angustiore attenuatis, seminibus majusculis, et forsán magnitudine proportionali calyptræ à me nondum visæ.

97. *VOITIA HYPERBOREA*, capsula globoso-ovata basi subtruncata, foliis dilatato-ovatis acuminatis.

Voitia hyperborea, Greville et Arnott in Wern. soc. mem. 4. tab. 7. f. 19. capsula, et 21. folium.

DESC. *Muscus* cæspites densos sæpius efformat, raro aliis, *Splachnis* præsertim, intermixtus. *Caulis* 6-9-lineas longi, tomento radicali inferne arcte cohærentes, innovationibus subramosi, basi foliis vetustis tomentoque radicali rufo-castaneo copioso tecti; ramis annotinis dense foliatis eradiculosis. *Folia* late ovata, modice concava, integerrima, acumine è nervo valido producto formato, $\frac{1}{4}$ longitudinis folii æquante, sed concolori nec nisi vetustate canescenti pilumque referenti, laxiuscule reticulata, areolis rectangulis, invicem inæqualibus sed per totam folii longitudinem uniformibus, marginalibus vix majoribus, madore erecta, siccitate subappressa. *Perichætalia* paulo majora, acuminè proportionatim longiore. *Vaginula* cylindracea, basi pistillis paucis abortivis stipata, indivisa, nec fissa nec bivalvis, apice membranaceo inæquali lacero. *Seta* elongata, caulem totum æquans v. parum superans, lævis, castanea, siccitate tortuosa. *Capsula* erecta, castanea, lævis, dilatato-ovata, basi transversa subtruncata, rostro apicis inclinato longitudine dimidii capsulæ, absque operculo ejusve omni vestigio: *exterior* coriacea, minute reticulata, areolis quadratis; *interior* ab exteriore libera, centro baseos umbilicatæ affixa, apice clauso processu subulato longitudine rostri exterioris, pallida, tenuè membranacea, utrinque lævis nec intus septis processubusve inæqualis. *Columella* angulata subtetragona, longitudine capsulæ interioris. *Semina* minutissima, Phasci bryoidis decies fere minora, in cumulo viridia, separatim hyalina, subglobosa, per lentem centies augmentem striis nonnullis insignita, sed simplicia nec divisibilia. *Masculus* *Flos* ramulum proprium, brevissimum, femineo collateralem hoc vero post fecundationem elongato demum quasi lateralem terminans, discoideo-gemmiformis,

femineo subimilis, foliis perigonalibus perichætalibus conformibus. *Antheræ* numerosæ, cylindricæ, leviter arcuatæ. *Paraphyses* copiosæ, articulis superioribus sensim crassioribus et brevioribus.

Obs. Valde affinis *Voitiæ* nivali quæ differt capsula oblongo-ovata basi acuta, foliis elongato-ovatis laxioribus, statura majori.

HEPATICÆ.

98. *JUNGERMANNIA MINUTA*, Schreb. in Crantz grönl. forts. p. 285. Dicks. fasc. 2. p. 13. *Wahlenb. lapp.* p. 393. *Hooker brit. junger. t.* 44. *Engl. bot.* 2231.

Jungermannia bicornis, *Flor. Dan.* 888. f. a. *Schwaegr. prodr. hepat.* p. 27. *Richardson in Franklin's journ.* p. 757.

Obs. Planta nostra, cujus exemplaria perpauca et fructificatione destituta tantum visa, media quasi inter *I. minutam* et *ventricosam*, ab utraque foliis explanatis, nec margine inferiore induplicatis, differt.

99. *MARCHANTIA POLYMORPHA*, Linn. sp. pl. ed. 2. p. 1603, *Flor. lapp. n.* 422. *Wahlenb. lapp.* p. 397. *Schmid. ic. p.* 106. t. 29. *Engl. bot.* 210. *Hooker scot. par.* 2. p. 119. *Mich. am. 2. p.* 277. *Br. in Flind. voy. 2. p.* 593. *Richardson in Franklin's journ.* p. 757.

LICHENOSÆ.

100. *GYROPHORA PROBOSCIDEA*, Achar. syn. p. 64. *Engl. bot.* 2484. *Hooker scot. par.* 2. p. 41.

Gyrophora proboscidea β. *Richardson in Franklin's journ.* p. 758. tab. 30. f. 4.

Gyromium proboscideum, *Wahlenb. lapp.* p. 483.

Obs. In nostra planta pagina inferior, quæ semper lævis fibrillisque destituta, sæpius cinerea, nunc tota atra; quandoque thallo ad ambitum cribroso *G. erosæ* accedit.

101. *LECANORA ELEGANS*, Achar. syn. p. 182. *Hooker scot. par.* 2. p. 50. *Richardson in Franklin's journ.* p. 760.

Lichen elegans, *Wahlenb. lapp.* p. 417. *Carpat. p.* 373. *Engl. bot.* 2181.

102. *BORRERA* ? *AURANTIACA*, thallo adscendenti aurantiaco tereti-compresso nudo subdichotomo basi pallido: ramulis ultimis brevissimis obtusis.

Obs. Affinis *B. flavicanti* Achar. l. c., utraque thallo teretiuseculo fruticuloso à reliquis diversa. In hac Apothecia ignota ideoque dubii generis est.

103. *CETRARIA JUNIPERINA*, Achar. syn. p. 226.

Obs. Vix omnino cum *C. juniperinâ* quadrant specimina nostra quibus laciniae crenatae nec erosae, margines pulvere destitutae, discus laevis vix manifeste lacunosus, et paginae, quae citrinae, concolores.

104. *CETRARIA NIVALIS*, *Achar. syn. p. 228. Hooker scot. par. 2. p. 57. Br. in Ross' voy. 2. ed. v. 2. p. 195. Spitz. pl. in Scoresby's arct. append. p. 76. Richardson in Franklin's journ. p. 761.*

Lichen nivalis, Linn. lapp. n. 446. t. 11. f. 1. Soland. in Phipps' voy. p. 203. Wahlenb. lapp. p. 433. Carpat. p. 379. Engl. bot. 1994. Svensk bot. 384.

105. *CETRARIA CUCULLATA*, *Achar. syn. p. 228. Richardson in Franklin's journ. p. 761.*

Lichen cucullatus, Smith in Linn. soc. transact. 1. p. 84. t. 4. f. 7. Wahlenb. lapp. p. 433. Upsal. p. 413. Carpat. p. 379.

106. *CETRARIA ISLANDICA*, *Achar. syn. p. 229. Hooker scot. par. 2. p. 58. Br. in Ross' voy. ed. 2. vol. 2. p. 195. Richardson in Franklin's journ. p. 761.*

Lichen islandicus, Linn. sp. pl. ed. 2. p. 1611. Flor. Dan. 155. Engl. bot. 1330. Svensk. bot. 34. Wahlenb. lapp. p. 434. Carpat. p. 379. Upsal. p. 413. Soland. in Phipps' voy. p. 203.

Physcia islandica, Mich. am. 2. p. 326.

107. *CETRARIA ODONTELLA*, *Achar. syn. p. 230.*

Lichen odontellus, Wahlenb. lapp. p. 434.

108. *PELTIDEA APHTHOSA*, *Achar. syn. p. 238. Wahlenb. lapp. p. 446. Carpat. p. 380. Svensk bot. 318. Hooker scot. par. 2. p. 60. Richardson in Franklin's journ. p. 761.*

Lichen aphthosus, Linn. sp. pl. ed. 2. p. 1616. Engl. bot. 1119. Wulfen in Jacqu. coll. 4. p. 266. t. 17.

109. *CORNICULARIA OCHROLEUCA*, *Achar. syn. p. 301. Hooker scot. par. 2. p. 69. Richardson in Franklin's journ. p. 762.*

Usnea ochroleuca, Hoffm. pl. lichen. 2. p. 7. t. 26. f. 2.

Lichen ochroleucus, Wahlenb. lapp. p. 438. Carpat. 382. Engl. bot. 2374.

110. *CORNICULARIA LANATA*, *Achar. syn. p. 302. Hooker scot. par. 2. p. 69.*

Lichen lanatus, Linn. sp. pl. ed. 2. p. 1623. Engl. bot. 846. Wahlenb. lapp. p. 440. Carpat. p. 383.

Lichen normöricus, Gunn. norv. par. 2. p. 123. t. 2. f. 9—14.

111. CERANIA VERMICULARIS, *Achar. syn. p. 278.*
Cenomyce? vermicularis, Hooker scot. par. 2. p. 65. Richardson in Franklin's journ. p. 762. Br. in Flinders' voy. 2. p. 594.
Bæomyces vermicularis, Wahlenb. lapp. p. 458.
Cladonia subuliformis, Hoffm. pl. lichen. 2. p. 15. t. 29. f. 1—3.
Lichen vermicularis, Dicks. crypt. fasc. 2. p. 23. t. 6. f. 10. Engl. bot. 2029.
Obs. Apothecia (?) lateralia, sparsa, atra, thallo innata coque submarginata, apotheciis Roccellæ aliquo modo accedentia, in exemplaribus nonnullis à D. Fisher lectis observavi.

112. CENOMYCE PYXIDATA, *Achar. syn. p. 252.*

113. STEREOCAULON PASCHALE, *Achar. syn. p. 284. Mich. am. 2. p. 331. Br. in Flinders' voy. 2. p. 594. Spitz. pl. in Scoresby's arct. 1. append. p. 76. Giesecke Greenl. in Edin. encyclop. Hooker scot. par. 2. p. 66. Richardson in Franklin's journ. p. 762.*
Bæomyces paschalis, Wahlenb. lapp. p. 450. Carpat. p. 386.
Lichen paschalis, Linn. sp. pl. ed. 2. v. 2. p. 1621. Soland. in Phipps' voy. p. 204.
Lichen ramulosus, Sw. fl. ind. occid. 3. p. 1917.

114. USNEA SPHACELATA, thallo erectiusculo fruticuliformi, ramis primariis ochroleucis nigro-vittatis lævibus, ultimis attenuatis nigris: sorediis confertis concoloribus ochroleucisve.
Usnea? prope melaxantham, Br. spitz. pl. in Scoresby's arct. 1. append. p. 76.
Obs. Proxima U. melaxanthæ Ach. syn. p. 303., differt statura aliquoties minore, ramis primariis lævibus, sorediorum præsentia. Apothecia nondum visa. Eandem speciem, sorediis pariter instructam apotheciisque destitutam, in summitate Montis Tabularis Insulæ Van Diemen, annæ 1804, legi.

FUNGI.

115. CANTHARELLUS LOBATUS, *Fries syst. mycolog. 1. p. 323.*
Helvella membranacea, Flor. Dan. 1077. f. 1.
116. LYCOPELON PRATENSE, *Pers. syn. fung. p. 142.*

Præter plantas supra enumeratas, species nonnullæ in herbariis citatis exstant, scilicet Muscorum quinque, Lecidæ v. Leprariæ unica, et Agarici tres: has vero è speciminibus vel fructificatione destitutis vel male exsiccatis haud determinare potui.

Algæ submersæ prorsus nullæ reportatæ fuere.

Species quæ Florulæ Melvillianæ adhucdum propriæ remanent sequentes sunt.

Ranunculus Sabinii, qui *nivali* nimis affinis.

Ranunculus affinis, proximus *auricomus*.

Draba pauciflora, valde dubia species.

Platypetalum dubium, cujus flores ignoti.

Sieversii Rossii, proxima *S. humili* Oonalashkæ indigena.

Tussilago corymbosa, valde affinis *T. frigida*.

Pedicularis arctica, prope *P. sudeticam* et *Langsdorfii*.

Dupontia Fisheri, gramine nulli cognito affinis.

Barbula leucostoma, quæ species distincta videtur.

Gymnostomum obtusifolium, species insignis, sed non satis cognita.

Splachnum arcticum, proximum *S. mnioidi*.

Borrera aurantiaca, Lichenosa distincta, sed dubii generis.

Genus itaque Insulæ Melville peculiare nullum restat nisi *Dupontia*, si hoc equidem servari meretur.

Aliquas observationes, species nonnullas Florulæ Melvillianæ illustrantes, derivatas ex herbarii inspectione ad litora orientalia Americæ arcticæ, inter grad. 66. et 70. lat., in novissima navigatione duce D. Parry, formati à D. Ross, cujus amicitia specimina totius collectionis debeo, hic subungere licet; ordine Florulæ servato numerisque specierum præfixis.

11. PLATYPETALUM PURPURASCENS.

Silicula v. ovali-oblongæ v. oblongæ, glabræ v. pilis raris brevibus simplicibus bifidisque conspersæ, *stigmatibus* quandoque capitato emarginato, nec semper bilobo lobis patentibus, coronatæ: *valvulis* aveniis, ecarinatis, planiusculis; *dessepimento* rarius fenestrato. *Semina* biseriata. *Cotyledones* incumbentes, angusto-oblongæ, rectæ nec basibus crus radiculare embryonis occupantibus.

Platypetalum itaque hinc *Subulariæ* affine inde *Eudemæ*, hæc vero differt stylo elongato, dissepimento semper fenestrato, et forsitan aliis notis è floribus examini accuratiore derivandis.

13. EUTREMA EDWARDSII.

Herba quandoque 4-6-uncialis.

18. STELLARIA EDWARDSII.

Exemplaria omnia ad var. α pertinent, foliis ovatis acutis caulibusque glaberrimis, pedunculis unifloris, antheris purpureis, capsulis erectis semisexualibus calycem vix superantibus, seminibus lævibus fuscis.

Species forsitan polygama, ad quam referenda *S. Edwardsii Richardson l. c.* ? et *S. nitida Hooker* ?

26. SAXIFRAGA UNIFLORA.

Exemplaria omnia stature majoris sunt, et pleraque caulibus 2-3-floris donata; ideoque hæc, quæ potius pro varietate insigni quam distincta specie supra proposita fuit, ad *S. cæspitosam* absque dubio reducenda.

36. OXYTROPIS ARCTICA.

Hujus varietas notabilis, vix enim distincta videtur species, statura minor, scapo sæpe unifloro passimque umbella biflora, dentibus calycis respectu tubi paulo longioribus, foliolis sæpius 7, quandoque 9, villis persistentibus utrinque argenteo-sericeis.

39. CINERARIA CONGESTA.

Herba quandoque spithamea, folia sæpius sinuato-dentata, nunc alte sinuata, passim indivisa; hæc exemplaria itaque propius *C. palustri* accedunt, inflorescentia densiore, lana magis copiosa et longiore præsertim distinguenda.

50. CAREX MISANDRA.

Hujus exemplaria aliqua completa, 6-9-uncialia, foliis linearibus apice attenuato, marginibus deorsum scabris, culmo lævi, spicis 3-4, alternis, raro subumbellatis, terminali basi solum rariusve tota mascula, stigmatibus sæpissime tribus. Hinc ad *C. fuliginosam Sternb. l. c.* procul dubio referenda.

51. CAREX CONCOLOR.

Specimina proceriora, spicis femineis longioribus, axi squamarum pallido, ad *C. cæspitosam* propius accedunt, et culmo lævi præcipue distingui possunt.

56. COLPODIUM LATIFOLIUM.

In exemplaribus plerisque rudimentum breve setuliforme flosculi secundi adest; necnon valvulæ inferioris perianthii setula denticulata dorsalis, 1-5 circiter ab ejusdem apice, nervum centralem terminans, altitudinem valvulæ vix æquans. Aliqua autem omnino mutica sicut pleraque ab Insula Melville.

57. POA ANGUSTATA.

Hujus, ni fallor, varietas nana (2-3-uncialis), perianthiis glaberrimis, locustis viridibus apicibus purpureis valvulæ inferioris perianthiorum solum exceptis.

58. POA ABBREVIATA.

Specimina pleraque vix triuncialia.

60. FESTUCA BREVIFOLIA.

Triviale nomen his exemplaribus vix convenit, quibus folia radicalia dimidium et ultra culmi æquant, et culmea vaginis suis proportionatim longiora sunt.

62. PLEUROPOGON SABINII.

Exemplar unicum cæspitosum, in palude à D. Ross lectum, ad var. β pertinet, culmis partialibus quadriuncialibus, antheris purpureis.

91. AFLODON WOERMSKIOLDII.

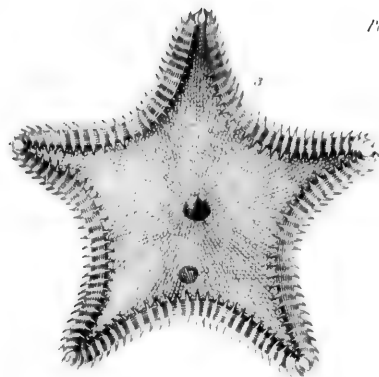
Exemplaria nonnulla varietatis à supra enumeratis diversæ, cujus folia acutiuscula absque acumine, apophysis ovato-globosa, nec basi attenuata, pallidè straminea, cava, axi solido, capsulâ castanea amplior.

97. VOITIA HYPERBOREA.

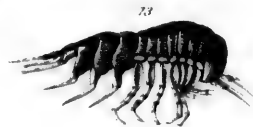
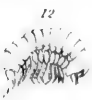
Sæpius aliis Muscis, Splachnis præsertim, intermistâ crescit.

FINIS.

almis
que
cap-



191



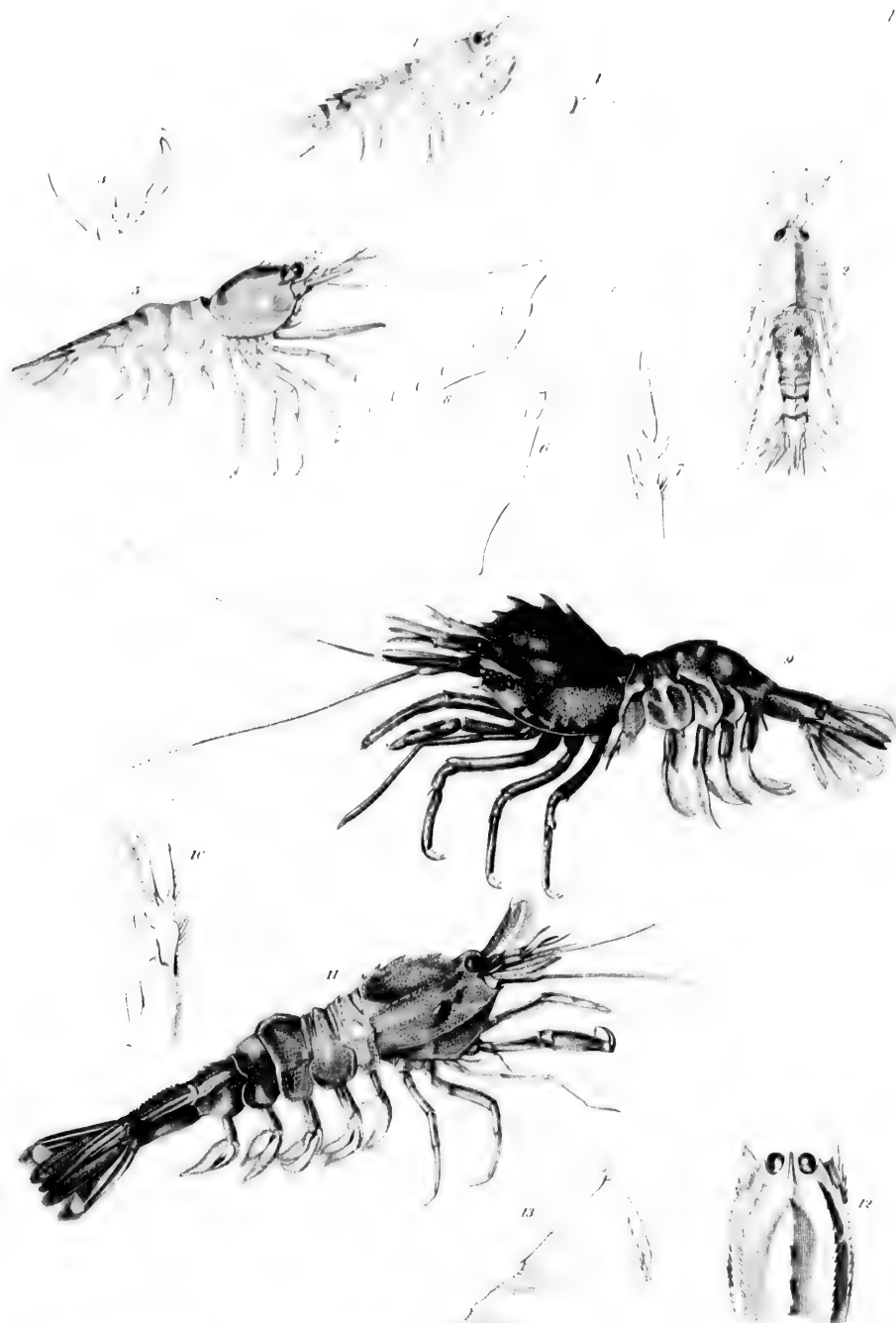
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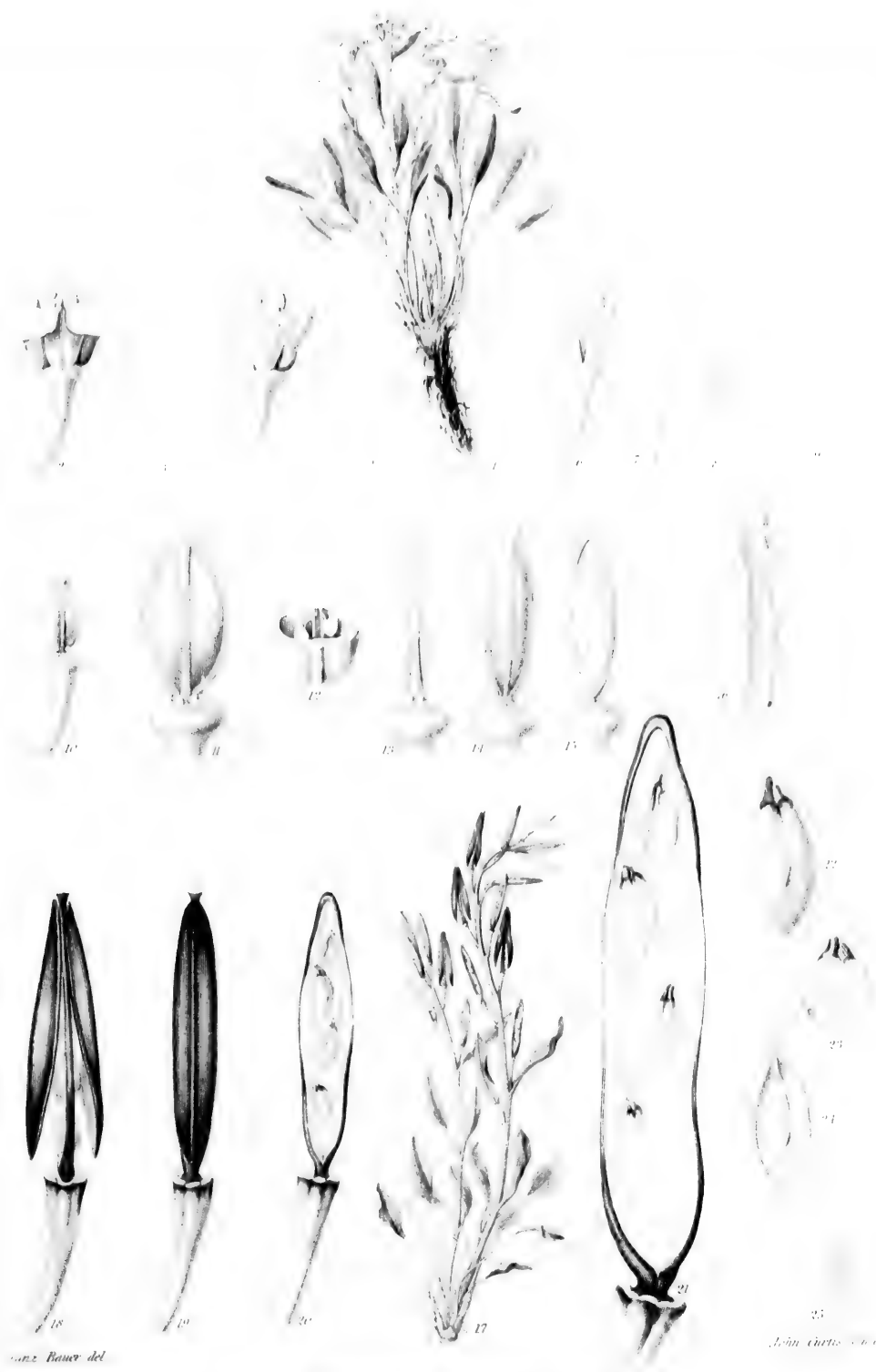
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Charis ad nat del et sculp



A. Curtis del. nat. del. et sculp.





Franz Bauer del

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John Curtis sculp



Franz Bauer del.

Published by John Murray, London, March 6 1852

John Curtis sculp.



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